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DEFENSE INTELLIGENCE AGENCY



PROJECTILE FRAGMENT IDENTIFICATION GUIDE  
FOREIGN (U)

PREPARED BY  
US ARMY  
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FOREIGN SCIENCE AND TECHNOLOGY CENTER

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PROJECTILE FRAGMENT IDENTIFICATION  
GUIDE-FOREIGN

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PREFACE

This guide serves as an aid in the identification of foreign projectiles and projectile fragments. Using weapons can be identified from the characteristics lists provided in appendix 1. Projectiles covered in this guide range in size from 37 mm through 280 mm.

The guide is recommended for use by field commanders, technical intelligence analysts, field collectors, ammunition research and development technicians, and explosive ordnance disposal personnel. Data contained herein have been collected and compiled from many sources that include intelligence reports, foreign documents, and results of arsenal examination of foreign hardware. Picatinny Arsenal prepared many of the drawings contained in this guide. This material has been carefully examined; the resulting technical data are considered reliable.

Requests for information concerning foreign projectiles not listed in this guide may be forwarded through channels to the Commander, US Army Foreign Science and Technology Center, 220 Seventh Street, NE., Charlottesville, Virginia 22901. Shipment of an item to be examined or identified should be forwarded to the Commander, US Army Foreign Science and Technology Center, Field Support Division, ATTN: AMXST-FS, Aberdeen Proving Ground, Maryland 21001. Comments concerning this publication should be forwarded to Director, Defense Intelligence Agency, Washington, DC 20301, ATTN: DT-2D.

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### SUMMARY

This guide presents a collection of data on Eurasian Communist antipersonnel and antitank rockets, grenades, mortars, and artillery projectiles currently in use. A sampling of projectiles of Free World countries is also included.

The methods of fragment recognition and analysis are explained in detail in section I and by using the reference tables provided in section II, the user will be able readily to identify recovered fragments. In some instances fragments may be too small or may lack specific detail necessary for positive identification. Generally, if the fragment consists of sizable portion of fuze well, rotating band, band seat, side wall, or base plug, identification is possible.

Section III supplements sections I and II with illustrated dimensional drawings and brief technical characteristics for each known projectile. The drawings in section III are cross-referenced by figure number in the ready-reference tables contained in section II.

The appendixes include characteristics lists on using weapons (appendix I), conversion tables of measure (appendix II), and transliteration of the Russian alphabet (appendix III). Appendix IV, glossaries of foreign terms, has been added to this edition to assist the user in translating foreign terms relative to projectiles described in this Guide.

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Section I.

IDENTIFICATION OF PROJECTILES AND PROJECTILE FRAGMENTS

A. GENERAL BASIS OF FRAGMENT ANALYSIS

1. Introduction

The caliber of a projectile, as well as the model of weapon from which it was fired, can be determined in the majority of cases by a visual and dimensional analysis of recovered duds or fragments. The accuracy of such an identification, however, is largely dependent upon the investigator's technical experience and the source of production, i.e., whether the item was produced in a country using standard manufacturing procedures. The internal and external dimensions of projectiles and such basic elements as rotating bands and the band seats vary sufficiently between calibers and types to form the basis for an accurate method of identification. The probability of error in this method is negligible. Artillery projectiles of major foreign countries are well made and within the same caliber and type group are almost invariably uniform in their dimensions. These criteria are not observed in projectiles manufactured by some of the less developed foreign countries, for example, projectiles manufactured by the People's Republic of China (PRC) in the early 1950's.

2. Fragment Analyses

Undeformed or slightly deformed fragments from low-order bursts are valuable for use in determining the projectile caliber. High-order detonation tends to distort and stretch fragments; therefore, thick base sections, particularly those including rotating bands, are most informative and permit the speediest identification. With experience, caliber can be accurately determined from small fragments of high-order bursts.

a. Rotating Bands and Band Seats. The number, type, and dimensions of rotating bands, and the pattern and dimension of the keying design on the band seat or on the inner surface of the rotating band, give important evidence as to caliber and type of projectile. The key design is also generally indicative of the country of origin.

b. Engraving of Band by Gun Tube Rifling. The width of the imprint of the land plus that of the groove engraved in the rotating band by the

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gun tube rifling is a good indication of projectile caliber. This width, land plus groove, is termed "r" in the following formula for determining the caliber of a projectile; C = caliber of projectile; N = number of lands or grooves; and  $\pi = 3.1416$ . This formula is exemplified below.

$$C = \frac{rN}{\pi}$$

A recovered projectile has 32 grooves; each groove measures 4.418 mm, and each land measures 4.418 mm. The "r" factor is therefore equal to 8.836 mm. Thus:

$$C = \frac{8.836 \times 32}{\pi} = 90 \text{ mm}$$

c. Markings and Components. On the body of the projectile or on projectile fragments, bits of paint, stenciling, and stampings will be found to provide an indication of identity. In addition, design dimensions of openings, threadings, fuze adapters, and base plugs also provide identification information; these clues are important to the trained investigator.

d. Fuzes. Fuzes and fuze fragments must be considered with caution, since the same fuze can be used with projectiles of several different calibers. For example, the Soviet Model RGM fuze is used with 100-, 122-, and 152-mm high explosive (HE) projectiles. Fuzes can be made of different materials (aluminum, copper, brass, plastics, iron, steel, etc.) and may be identified by differences in shapes, details, openings, and stampings.

e. Craters. The size of craters where fragments are recovered is to some extent an indicator of the projectile caliber. Crater size, however, is in general an unreliable indication, because it depends on too many variable factors. For example, a 76-mm HE projectile fuze for short delay will produce a larger and deeper crater in loose earth than an 85-mm HE projectile fuze for instantaneous action. Crater size also varies with the type of soil encountered, even though identical projectiles and fuze settings are used.

### 3. Marking Systems

Each country has a system of marking projectiles for identification. Some systems are uniform; others are not. Projectiles designed, developed, and manufactured by the major foreign countries with the exceptions of PRC, North Korea, and North Vietnam, are well marked for identification. These countries often use coding that hinders identification of the country of origin.

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a. Symbols representing the models, calibers, and weight zones of the projectiles of the USSR and other Eurasian countries are usually stenciled on the projectiles in black paint between the bourrelet and the rotating band. Above the leading bourrelet are the identification number of the factory, lot number, and year of manufacture, also stenciled in black paint. The Soviets use a short model designation consisting of Cyrillic letters and numbers that identify the projectile type and the series of using weapons. For instance, "A" followed by "412" indicates that the projectile type is propaganda and that the projectile can be used in all 100-mm weapons bearing the 412-series number. An explanation of some of the letters included in Soviet model designations for ammunition are:

<u>Russian</u>	<u>English</u>	<u>Meaning</u>
А	A	Propaganda or fragmentation (cast iron)
Б	B	Armor piercing
БР	BR	Armor piercing tracer
БРП	BZR	Armor piercing incendiary tracer
БМ	BM	Armor piercing discarding sabot
БП	BP	High explosive antitank, spin stabilized.
БК	BK	High explosive antitank, fin stabilized
БЗ	BZ	Armor piercing incendiary
Д	D	Smoke
Ф	F	High explosive
Г	G	Concrete piercing
М	M	Copper liner (shaped charges)
О	O	Fragmentation
ОФ	OF	Fragmentation high explosive
ОФП	OFR	Fragmentation high explosive tracer
ОР	OR	Fragmentation tracer
ОЗ	OZ	Fragmentation incendiary
ОХ	OKh	Fragmentation gas
ПГ	PG	High explosive antitank (pertaining to launched grenades)

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<u>Russian</u>	<u>English</u>	<u>Meaning</u>
П	PU	Target practice
Р	R	Tracer
С	S	Illuminating
СП	SP	Solid shot armor piercing
Ш	Sh	Canister or ball shrapnel
Шх	Shch	Canister or ball shrapnel
У	U	Fixed round
В	V	Separate loading
Ж	Zh	Sintered iron rotating band
Х	Kh	Gas
З	Z	Incendiary

b. In general, projectiles manufactured by the foreign Free World countries are marked with the same type of information as indicated above. Most of the Free World countries use abbreviations such as HEAT, for high explosive antitank, and HE, for high explosive, to indicate projectile type.

c. Most Free World countries use symbols such as TNT, RDX, and Comp B to identify the explosive filler of a projectile; the USSR and most other Eurasian Communist countries use similar symbols. Soviet symbols and their meanings are indicated below.

<u>Russian</u>	<u>English</u>	<u>Explosive/Chemical</u>
А	A	Amatol
А-40	A-40	Amatol (40% ammonium nitrate, 60% TNT)
АТ-40	AT-40	Amatol 40/60 (40% ammonium nitrate, 60% TNT)
А-80	A-80	Amatol 80/20 (80% ammonium nitrate, 20% TNT)
АТ-90	AT-90	Amatol 90/10 (90% ammonium nitrate, 10% TNT)
АТФ-40	ATF-40	TNT (60% TNT, 40% ammonium nitrate)

T denotes the use of a pressed TNT pellet with charge.

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<u>Russian</u>	<u>English</u>	<u>Explosive/Chemical</u>
A-IX-I	A-IX-1	RDx 94% and wax 6%
A-IX-2	A-IX-2	RDx 73%, aluminum 23%; wax 4%
A-IX-P	A-IX-P	RDx with unknown suffix "p"
ДБ	DB	Dinitrobenzol
ДБТ	DBT	Dinitrobenzene and TNT
Г	G	Hexogen (cyclonite, RDx)
М	M	Picric acid
М-1	K-1	70% TNT, 30% dinitrobenzene
М-2	K-2	80% TNT, 20% dinitrobenzene
Т	T	Trotyl (TNT)
Т-80	T-80	80% TNT, 20% RDx
ТГ	TG	TNT and RDx
ТГ-30	TG-30	30% TNT, 70% hexogen (RDx)
ТГ-50	TG-50	50% TNT, 50% hexogen (RDx)
ТА-42	TD-42	TNT/dinitronaphthalene
ТАУ	TDU	TNT with aluminum powder
ТС	TS	TNT sulfite
Ш	Sh	Schneiderite (ammonium nitrate 88%, dinitronaphthalene 12%)
ШТ	ShT	Schneiderite and TNT
Р-4	R-4	White phosphorus
Р-5	R-5	Mustard gas
РС	RS	Lewisite gas
РЮ	RYu	Phosgene gas
Р-15	R-15	Adamsite gas

d. Some foreign countries employ a system for identifying projectiles by color markings, especially on ammunition manufactured during nonwar periods. Bands, portions of ogive, or entire projectiles are painted. This system can be relied on only to a limited degree because of the wide divergence and various methods used among countries and among different categories of ammunition within a country. Frequently

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the same color is found on both HE and armor piercing projectiles. Current data on the color-marking systems of foreign countries on this method of identifying foreign projectiles are not available.

## B. FRAGMENT ILLUSTRATIONS

### 4. General

a. Some foreign countries are currently using a variety of projectile designs to achieve increased fragmentation effectiveness against personnel and materiel.

b. The well-known forged-steel, gray cast-iron, and nodular- and malleable-iron projectiles are being improved metallurgically to increase their fragmentation effectiveness (smaller and more uniform fragments). A normal gray, cast-iron, 82-mm mortar projectile will produce over 5,000 fragments, of which approximately 3,600 are very small (less than 6 grains). These fragments are formed by detonation of the explosive filler into a variety of shapes; few, if any, are identical. Identical fragments will be produced only by specifically designed projectiles; examples are those having preformed fragments (d below).

c. Fire-formed fragments (figs 1 through 3c) are those obtained from a projectile or warhead that consists of an explosive charge surrounded by a solid metal casing. Fragment size, weight, and shape vary considerably, and seldom are any of the fragments identical. Identifying the firing weapon on the basis of the irregularly shaped perforations caused by fragments from normal HE projectiles is extremely difficult. Key fragments are needed if any degree of success is to be achieved in identifying the projectile.

d. Preformed fragments (fig 4) are those that are formed in final shape prior to detonation of the explosive charge of the projectile. The projectile or warhead usually acts only as the carrier with one or more explosive charges surrounded by a wall of preformed metal fragments. In some cases fragments are provided when the explosive charge is surrounded by a prescored casing or when some other design is used whereby the fragment size, shape, and weight are predetermined. (Use of preformed fragments dates back to the Civil War, when pieces of metal were imbedded in the explosive fillers of cannon balls.) Weight, size, and shape of resulting individual fragments depend on the intended application. Fragment shapes include squares, spheres, cubes, and aerodynamically stable configurations (flechettes) resembling darts. Also, a number of other uniform shapes result from innovation of design, for example, prescoring of casings or notching wire-wrapped bodies. Usually, preformed

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fragments are mechanically held in proper orientation around the charge by either cementing in place in the fragment chamber or imbedding in a plastic or frangible substance. Other fragments from the projectile casing assume individual shapes during detonation of the explosive charge. The casing is scored or notched into individual fragments of the desired size and shape upon detonation of the explosive.

5. Illustrations of Typical Projectile Fragments

The following illustrations show various types and sizes of fragments.

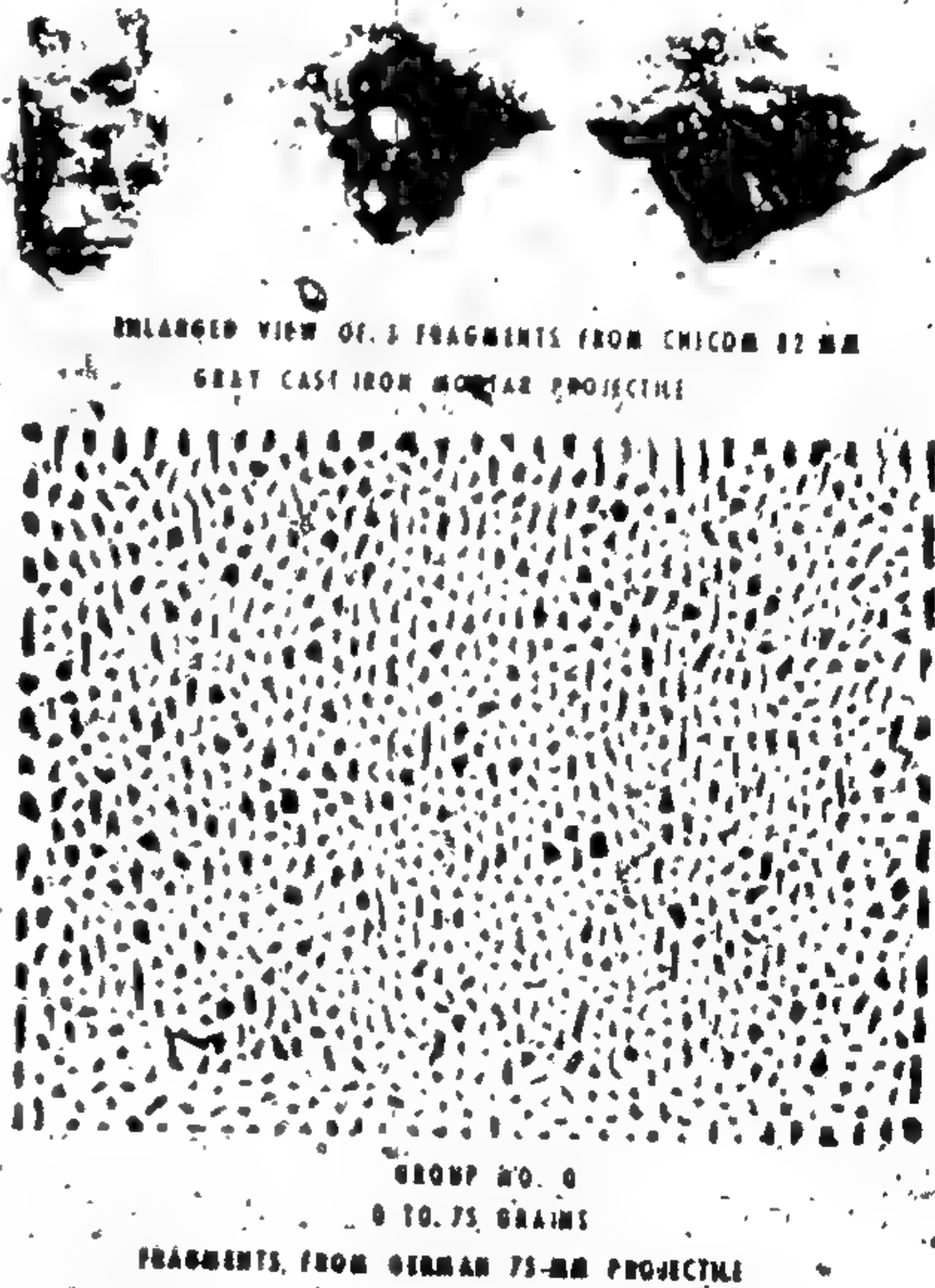
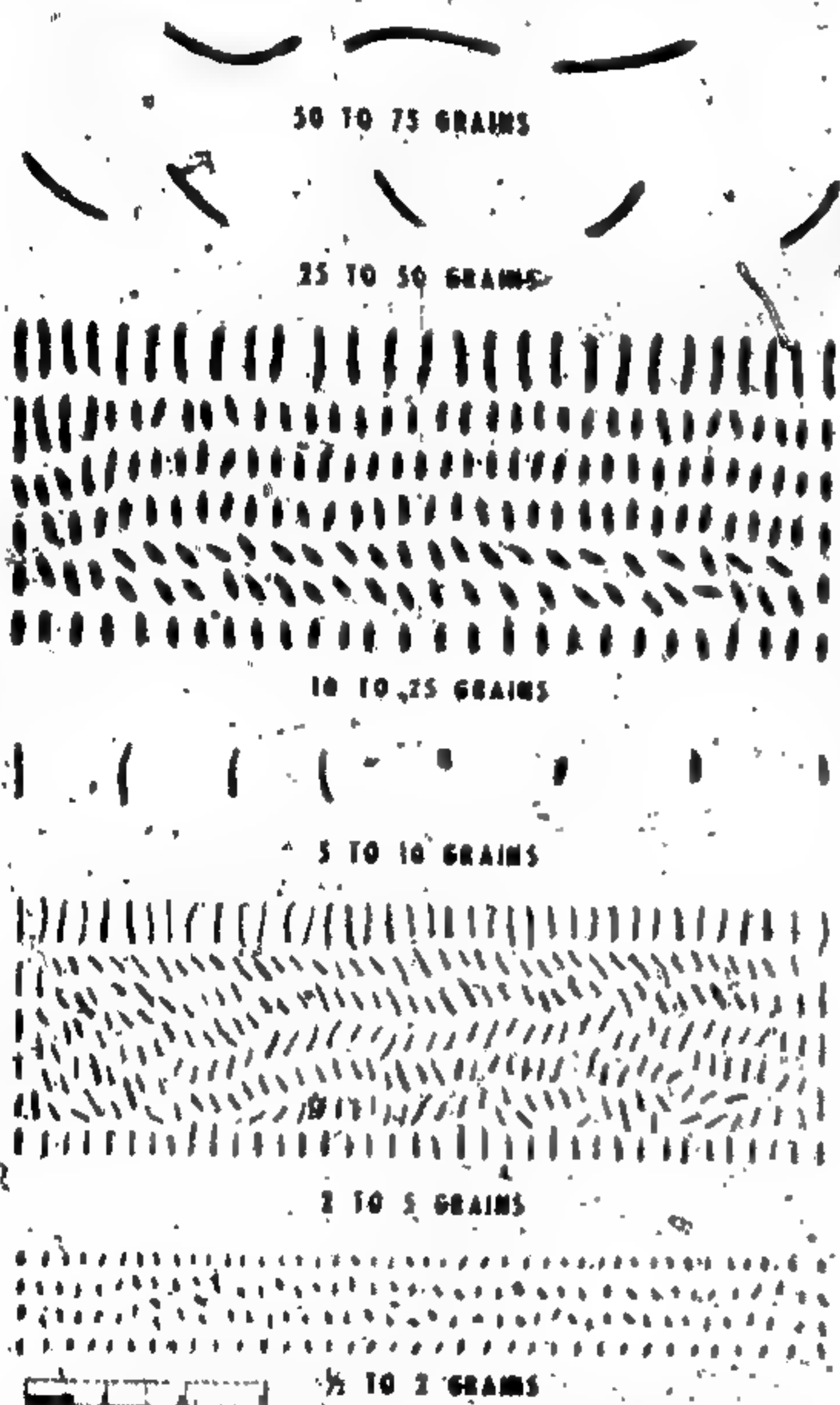


Figure 1. Typical projectile fragments.

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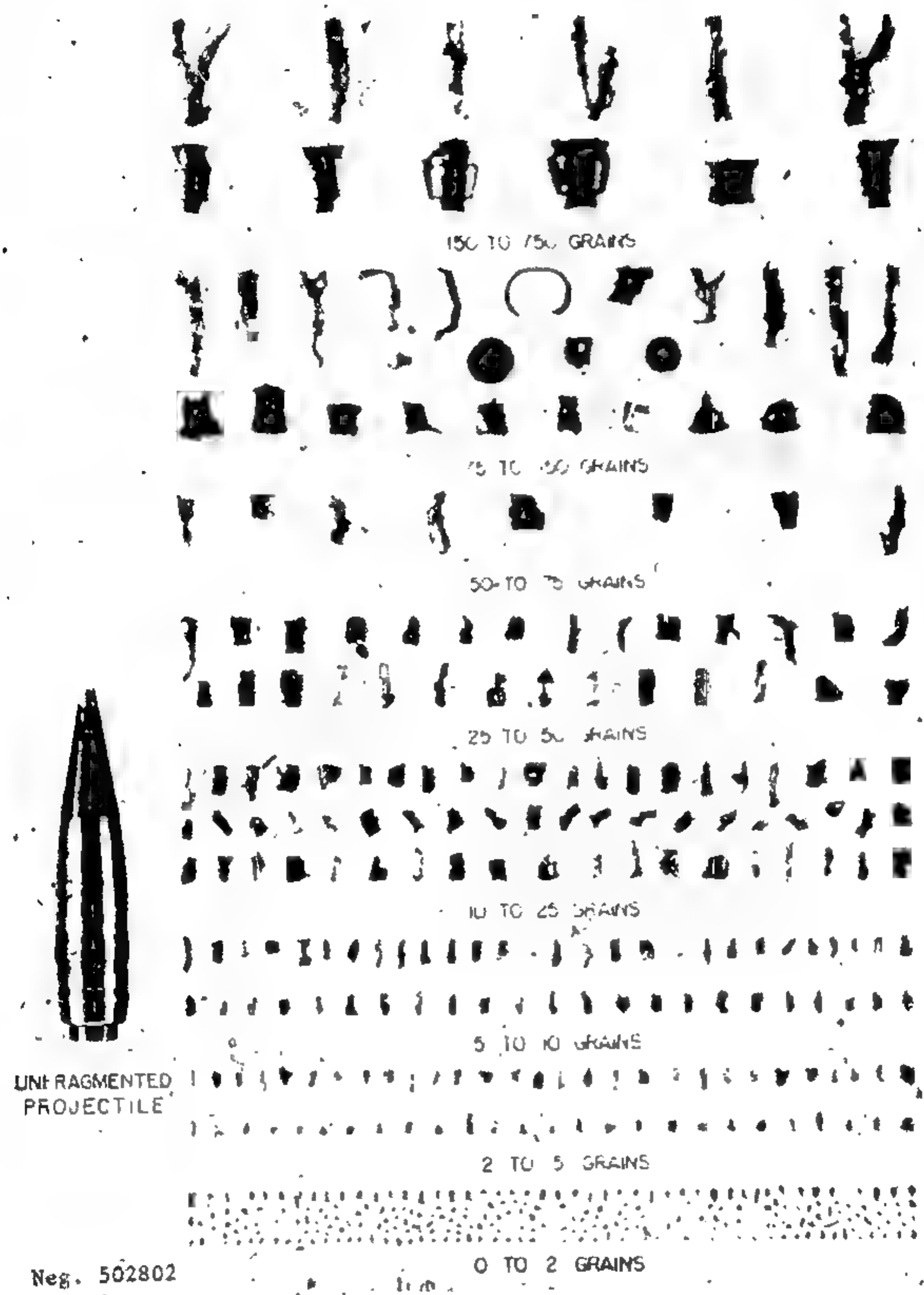


Figure 2. Projectile fragments from the Soviet 37-mm Frag-T Model OR-167.

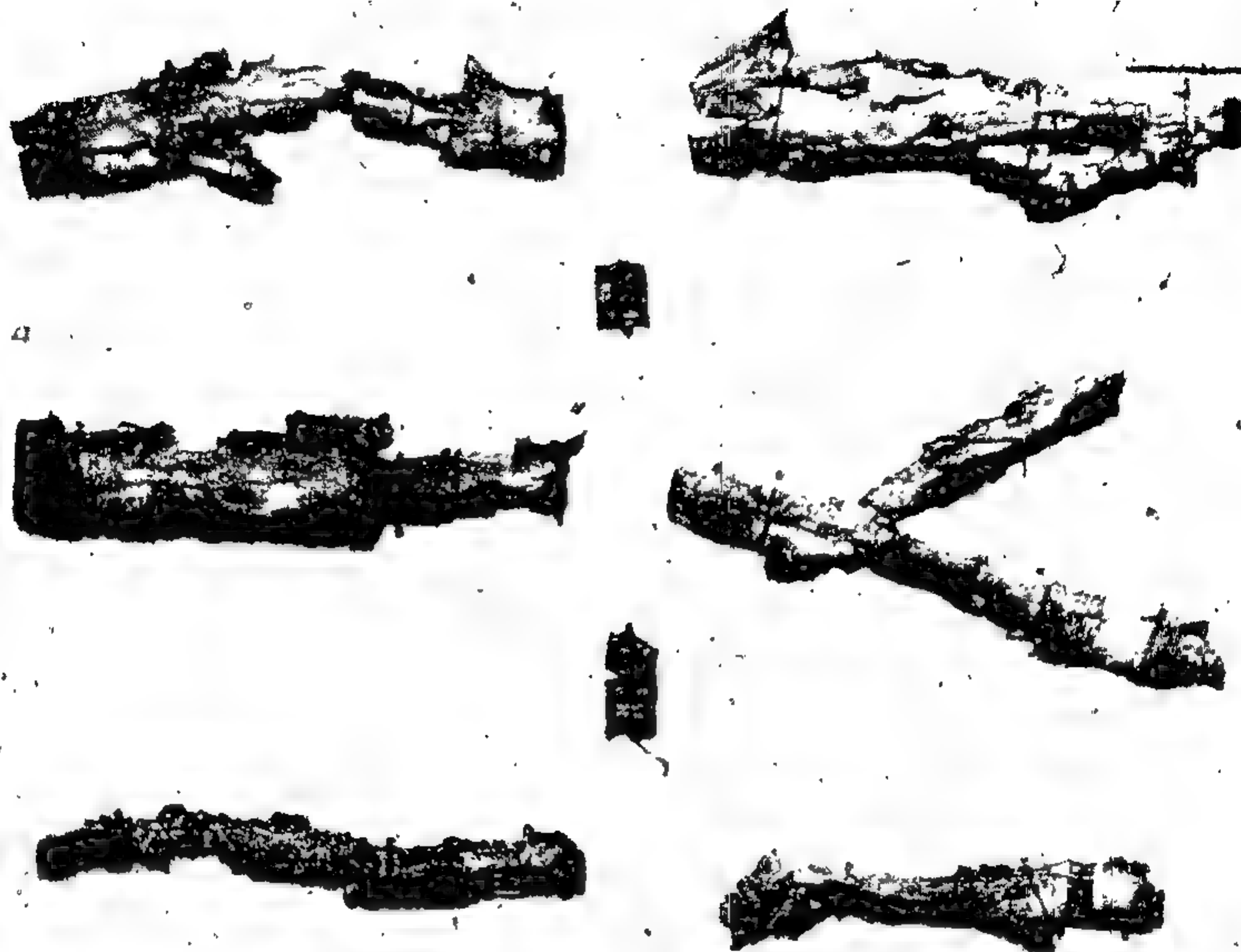
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Reg. 902803

Figure 3. Soviet 45-mm fragments from frag projectile Model  
O-240.

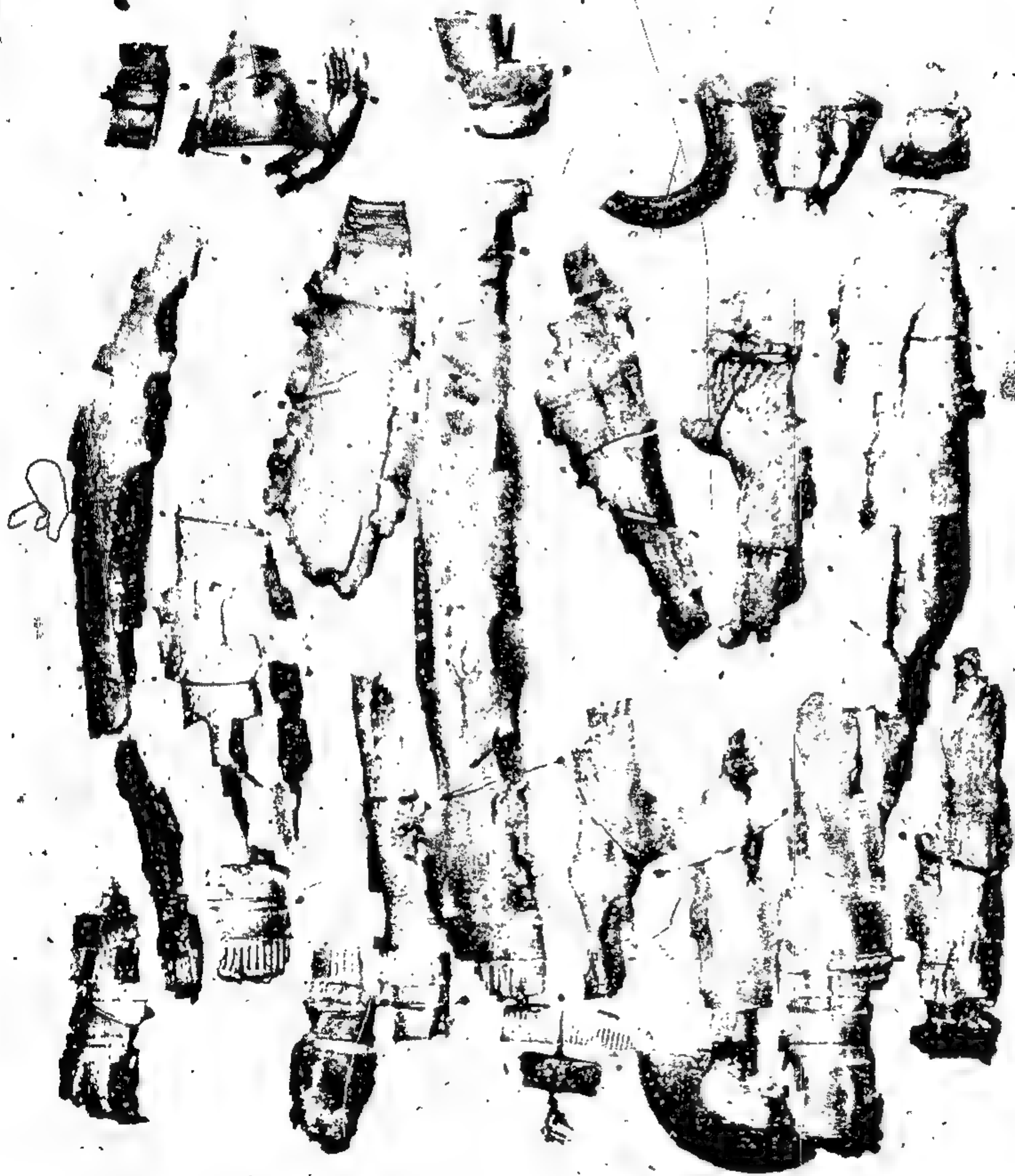
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Figure 14. ARC 75 and fragments from H. polyethylene 100-20-1.

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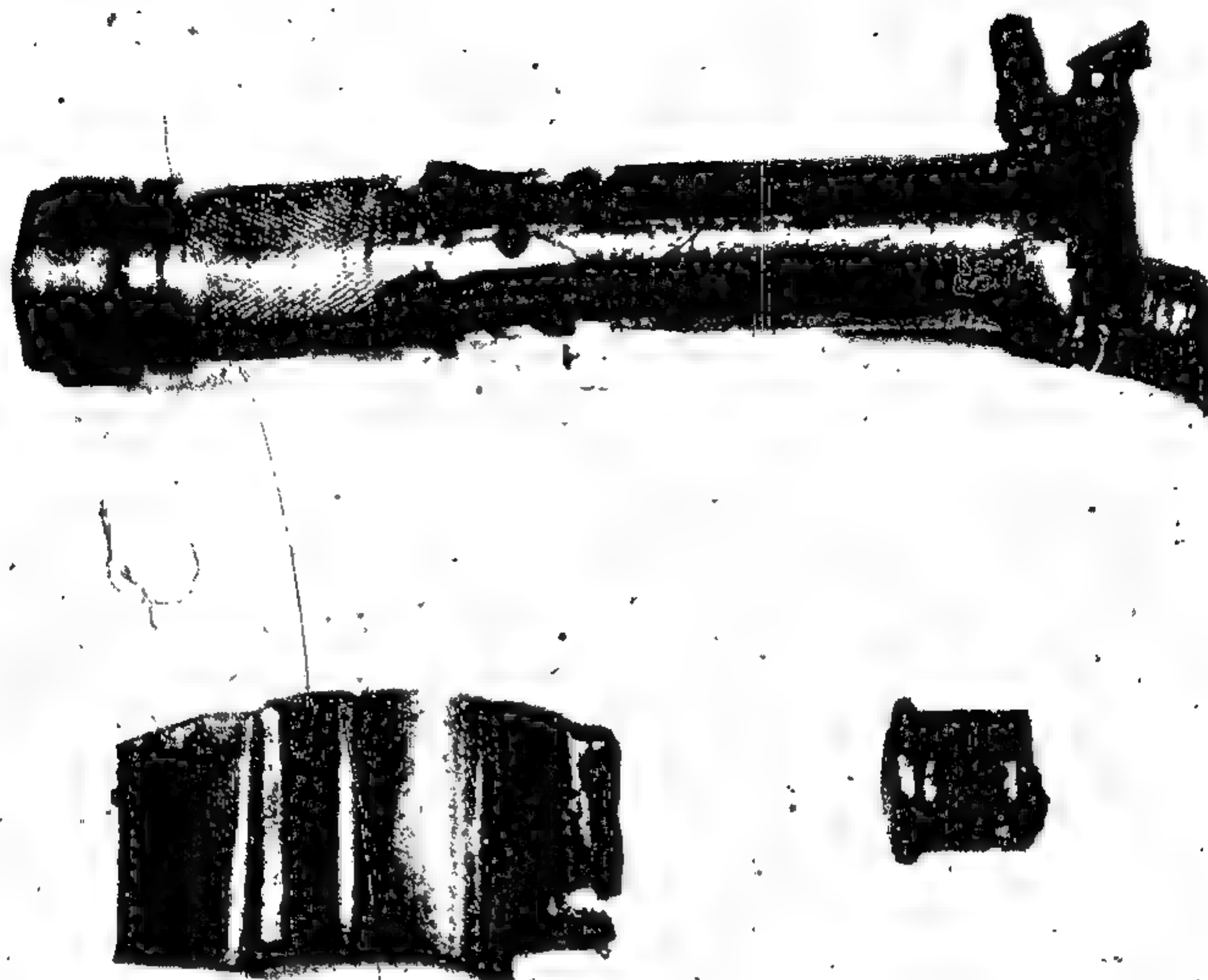


Figure 3b. PRC 82-mm fragments from fin and boom assembly Type 65 HEAT projectile.

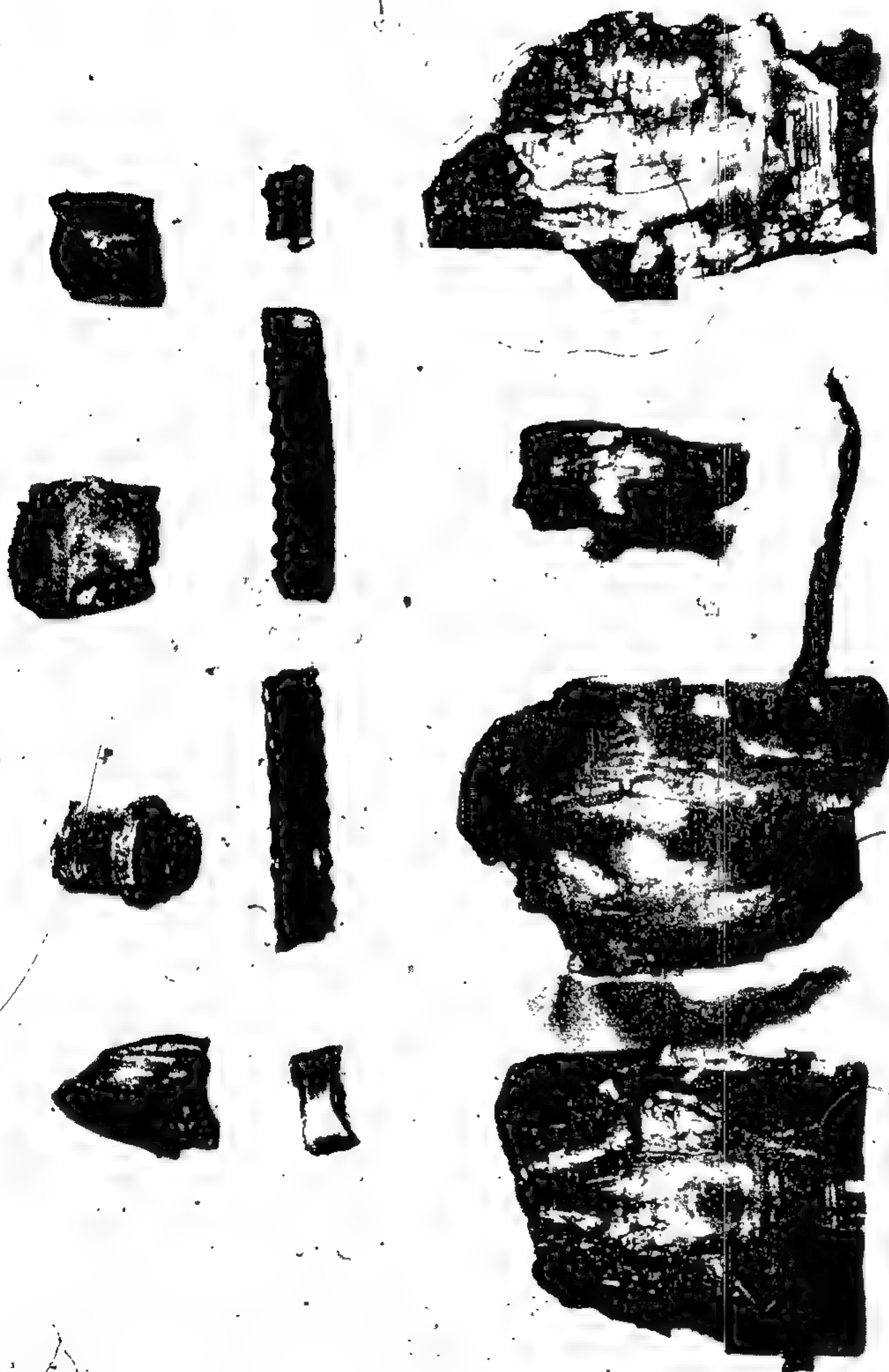
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Figure 3c. Soviet 100-mm fragments from Model BR-412D APC-T projectile.

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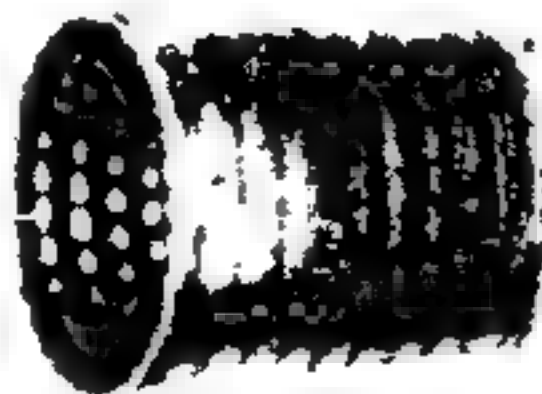


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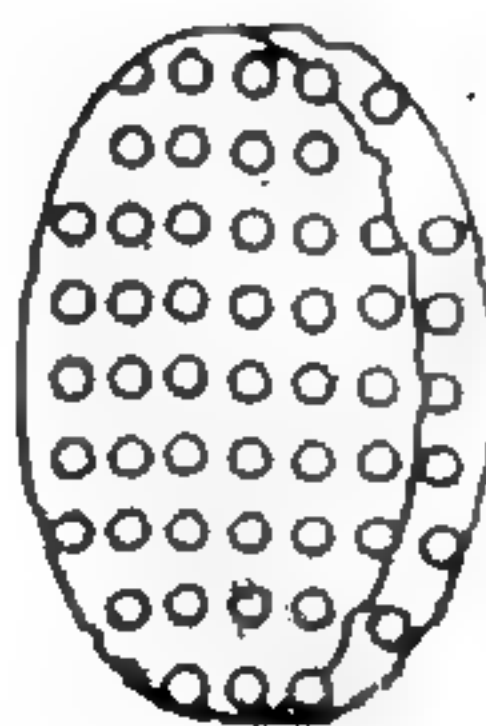
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**(A) NOTCHED WIRE**

Flat or round 1/8-inch diameter or less.  
If formed into coils, cylinders or spheres  
would probably be brazed.

**(B) SINTERED MATRIX**

Fragment can be pieces of  
chopped wire or built in an  
aluminum or plastic matrix.  
Can also be embedded in the  
conductive filler.

**(C) SINTERED**

After sintering, metal can be formed  
into hexagons or cylinders.



Fig. 502804

Figure 4. Preformed fragments.

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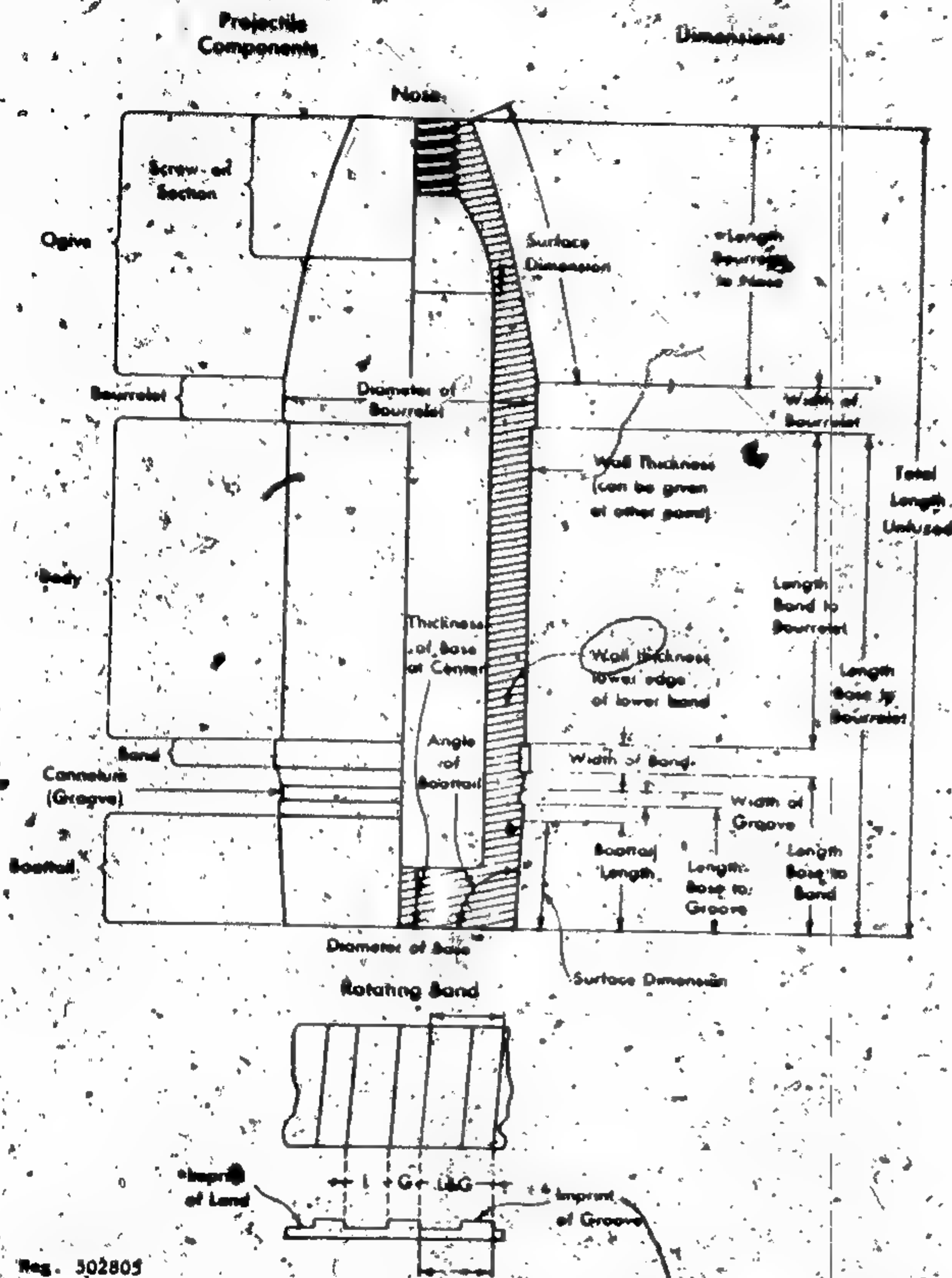


Figure 5. Critical measurements and components needed to identify a projectile.

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### C. READY-REFERENCE PROJECTILE IDENTIFICATION SYSTEM

#### 6. Basis

a. Projectiles manufactured by major foreign countries are identified by a specific model number<sup>1</sup>, which is stenciled on the projectile body. Projectiles of different type and caliber vary appreciably in certain respects such as the weight, filler, wall thickness, fuze well, and base plug dimensions. By breaking a projectile into significant or critical dimensions and components, as shown in figure 5, and arranging these dimensions and components in conjunction with the tables shown in section II, identification by systematic elimination or selection is possible. Proper use of the tables will result in the correct identification of model, caliber, etc. of the projectile (and in some instances of the firing weapon), with the data obtained from a key fragment.

b. The caliber of a projectile can be determined by geometric analysis of fragments. Instructions for accurate determination of projectile caliber are provided in paragraph 10.

c. Fragments that contain a part of the rotating band seat provide noteworthy information on the caliber of a projectile and the country of origin. Caliber determination is discussed in paragraph 11.

#### 7. Tools and Instruments Required

a. Tape measure or rule. Should be the flexible steel type to measure curved as well as straight surfaces. May be graduated in inches or millimeters.

b. Micrometer set. At least a 1 through 6-inch set. Can be graduated in metric.

c. Dividers, drawing. At least two size ranges.

d. Compass, drawing. At least two size ranges.

e. Template. Can be locally fabricated from sheet steel or aluminum stock. The template is used for quick field identification of projectile radii. Such identification is less accurate than diameter measurements.

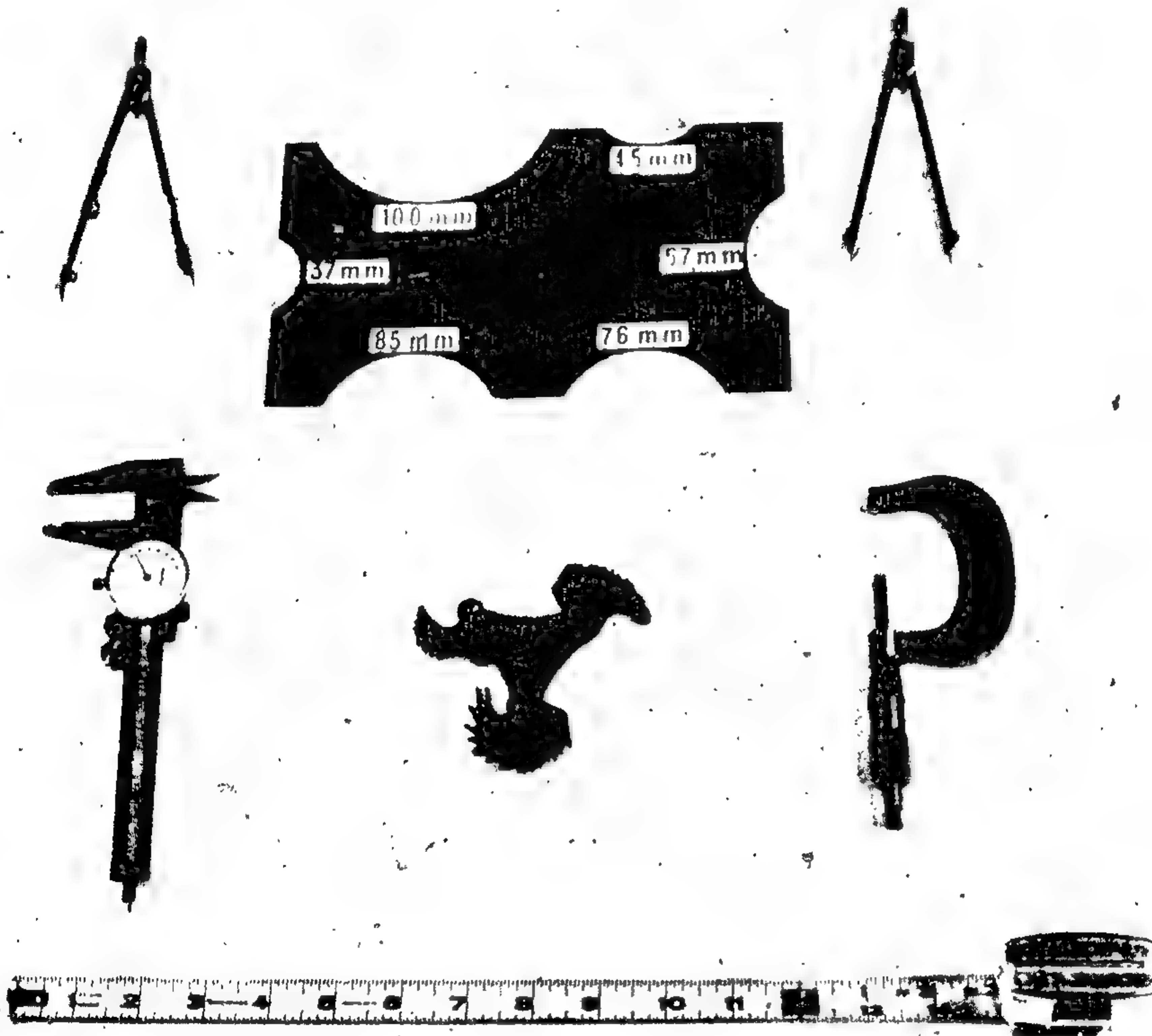
To insure accuracy of information, the model numbers should always be indicated when making inquiries about a projectile.

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f. Screw pitch gage. Used to measure all threaded and serrated surfaces.

g. Other miscellaneous tools and instruments such as protractors, calipers, and magnifying glasses may also be useful. See figure 6.



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Figure 6. Measuring instruments for projectile identification.



8. Description of the Ready-Reference System

a. The series of ready-reference tables given in section II are to be used in conjunction with the projectile drawings and descriptions given in section III. The tables contain listings of known critical dimensions of projectiles and other identifying information arranged by subject. The most significant characteristic of a projectile is listed in the first column following the projectile identification model.

b. All projectile drawings in section III are arranged by caliber and type. The tables in section II list the projectile caliber in millimeters in the first column and the projectile type in the second column. The following abbreviations denote projectile types:

<u>Abbreviation</u>	<u>Type of projectile</u>
AP	armor piercing
APC	armor piercing capped
APC-T	armor piercing capped tracer
AP-T	armor piercing tracer
AP-I	armor piercing incendiary
API-T	armor piercing incendiary tracer
cstr	canister
CP	concrete piercing
frag	fragmentation
frag-T	fragmentation tracer
frag-HE	fragmentation high explosive
HE	high explosive
HEAT	high explosive antitank (shaped charge)
HEAT-FS	high explosive antitank fin stabilized
HE-gas	high explosive gas
HEI	high explosive incendiary
HEI-T	high explosive incendiary tracer
HEP	high explosive plastic
HVAP	hypervelocity armor piercing



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## Abbreviation

## Type of projectile

HVAPDS-T	-----	hypervelocity armor piercing discarding sabot tracer
HVAPFSDS	-----	hypervelocity armor piercing fin stabilized discarding sabot
HVAP-T	-----	hypervelocity armor piercing tracer
illum	-----	illuminating
SAP	-----	semiarmor piercing
WP	-----	white phosphorous

## 9. Use of the Ready-Reference System

a. General. To identify a projectile or a projectile fragment, select an appropriate table from the index of ready-reference tables provided in section II; scan the appropriate columns and check the entries having characteristics and dimensions similar to those of the unidentified projectile or fragment. Possibilities can be eliminated by referencing the secondary columns in other tables, specifically the last column. The example in b below is illustrative for identifying a projectile on the basis of a fragment.

### b. Example--Fragment of a Projectile.

(1) A fragment including most of the projectile base is recovered. Critical dimensions are determined to be:

Diameter of base	-----	2.65 inch
Wall thickness at center of base	-----	1.03 inch
Width of rotating band	-----	0.43 inch
Wall thickness at upper edge of rotating band	-----	0.72 inch

(2) From the ready-reference tables index (para 1, sec II), table X is identified with projectile diameters. Investigation of the "base diameter" column reveals that only three projectiles have a base diameter of 2.65 inches: the 85-mm fragmentation projectiles Models 0-365, 0-365-two-piece, and 0-365K. All projectiles having calibers other than 85 millimeters are therefore eliminated.



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(3) Again from the table index (para 1, sec II), table XI is identified with "wall thickness." Reading down the "base center" column, the figure 1.03 is found. Since only the 85-mm Model O-365 has a center-of-base wall thickness of 1.03 inches, Models O-365--two-piece and O-365K are eliminated. In the last column of table XI, reference is made to figure 59, which is a drawing of the 85-mm fragmentation projectile Model O-365. A check of this drawing reveals that the other two dimensions given for the fragment, width of rotating band/wall and thickness at upper edge of rotating band, agree with dimensions of these components in the drawing of Model O-365. Thus, the fragment is identified as part of the 85-mm fragmentation projectile Model O-365.

(4) The tabulated data in figure 6 denotes further that this projectile is fired from the Model 1 KS-12 (M1939) and KS-12A (M1947) antiaircraft guns, the M1944 tank guns, the M1943 self-propelled assault, the field gun D-44, and the auxiliary-propelled antitank gun SD-44. Information on the performance of these weapons may be found in appendix 1.

#### 10. Determination of Caliber by Geometric Analysis of Fragments

a. General. The geometric method of determining projectile caliber is based on the problem of circumscribing a circle about a triangle. To attain accurate results by this method, the following conditions must prevail:

(1) The fragment selected should be as large as possible. In circumference it must exceed 1/2 inch for small calibers, 1 inch for intermediate calibers, and 2 inches for large calibers.

(2) The fragment must be from that portion of the projectile between the rotating band and the bourrelet. In the case of a non-boattail (square base) projectile, the fragment may be from any portion between the bourrelet and the base.

(3) The fragment should be undistorted, if possible. However, if the fragment is only slightly distorted, the results will be fairly accurate and will give a close approximation of the caliber. The fragment must be representative of a true curve surface.

b. Example (fig 7). A suitable fragment that meets the above conditions has been recovered. To determine the approximate caliber, proceed as follows:

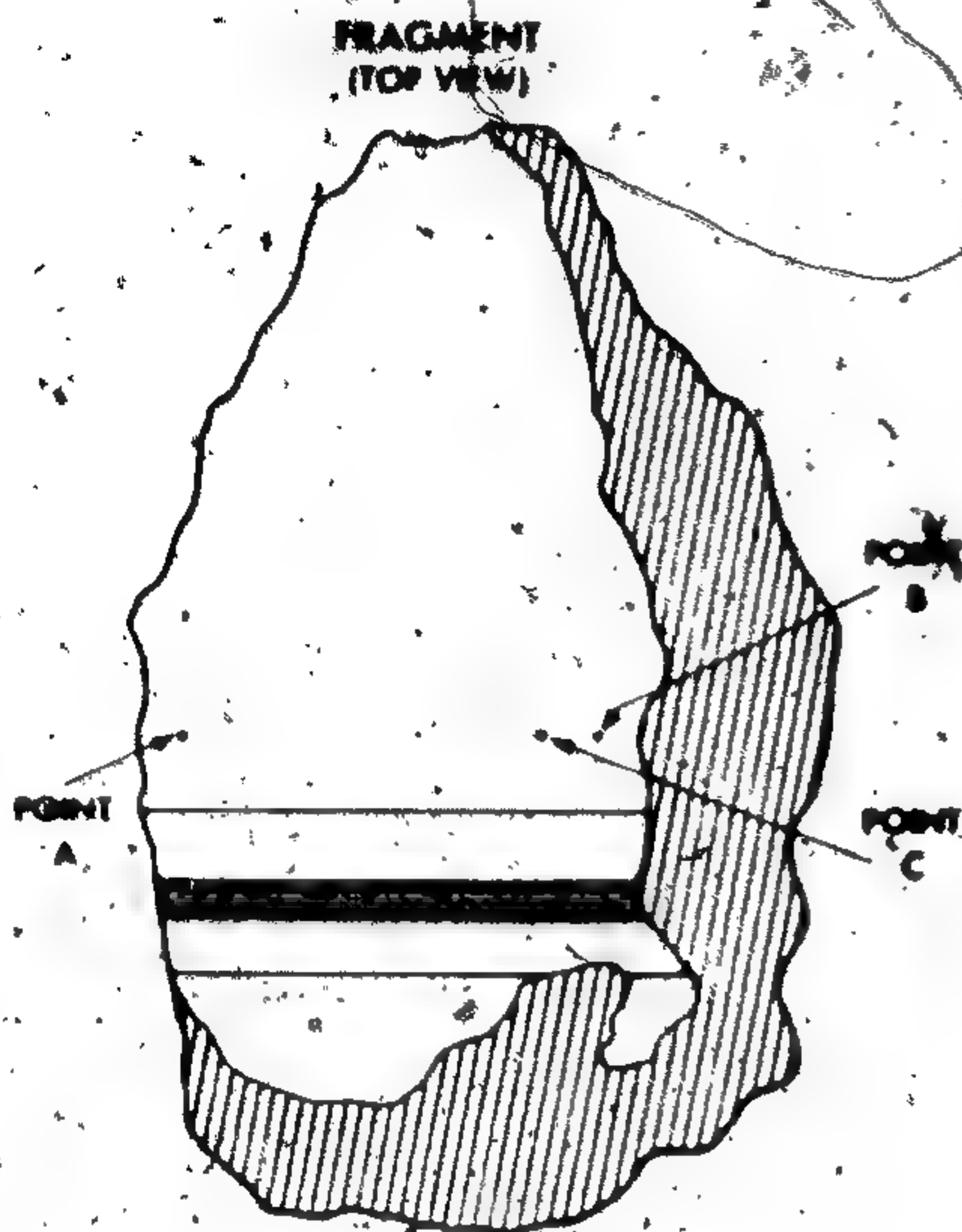
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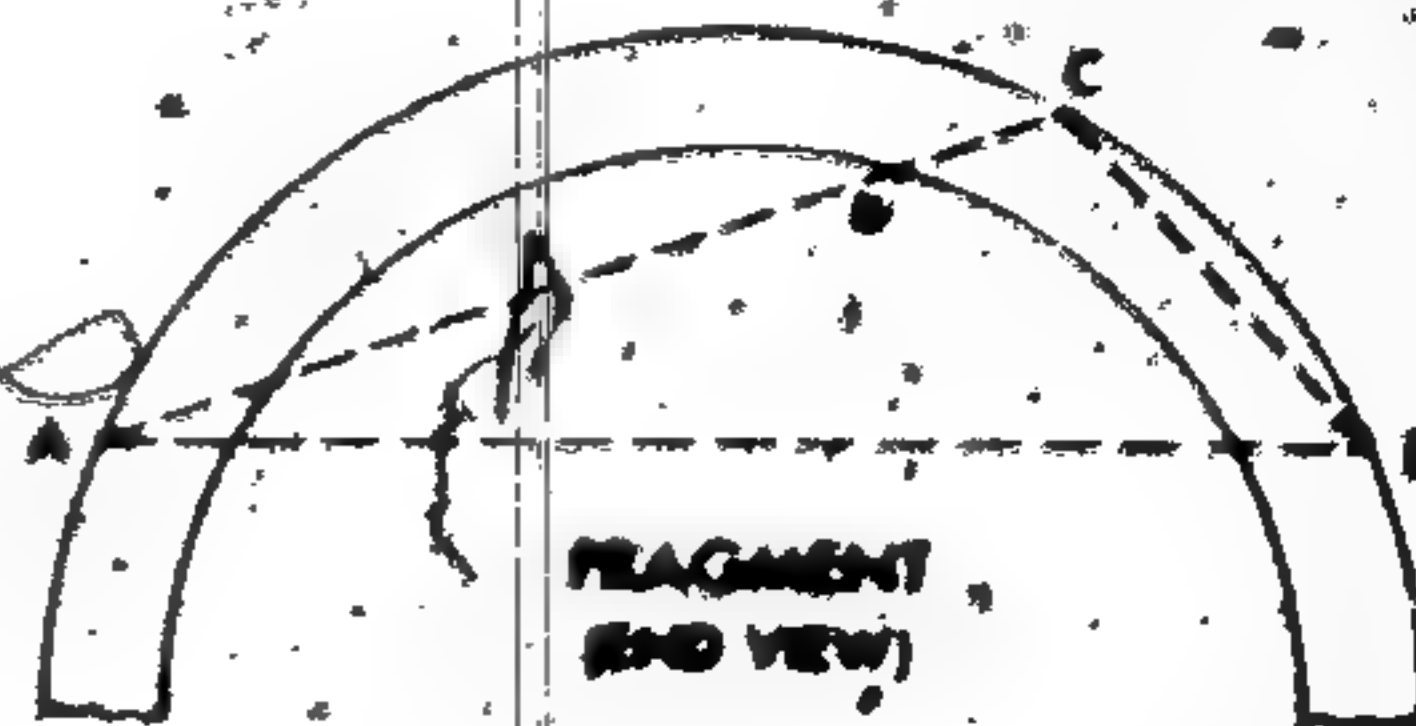
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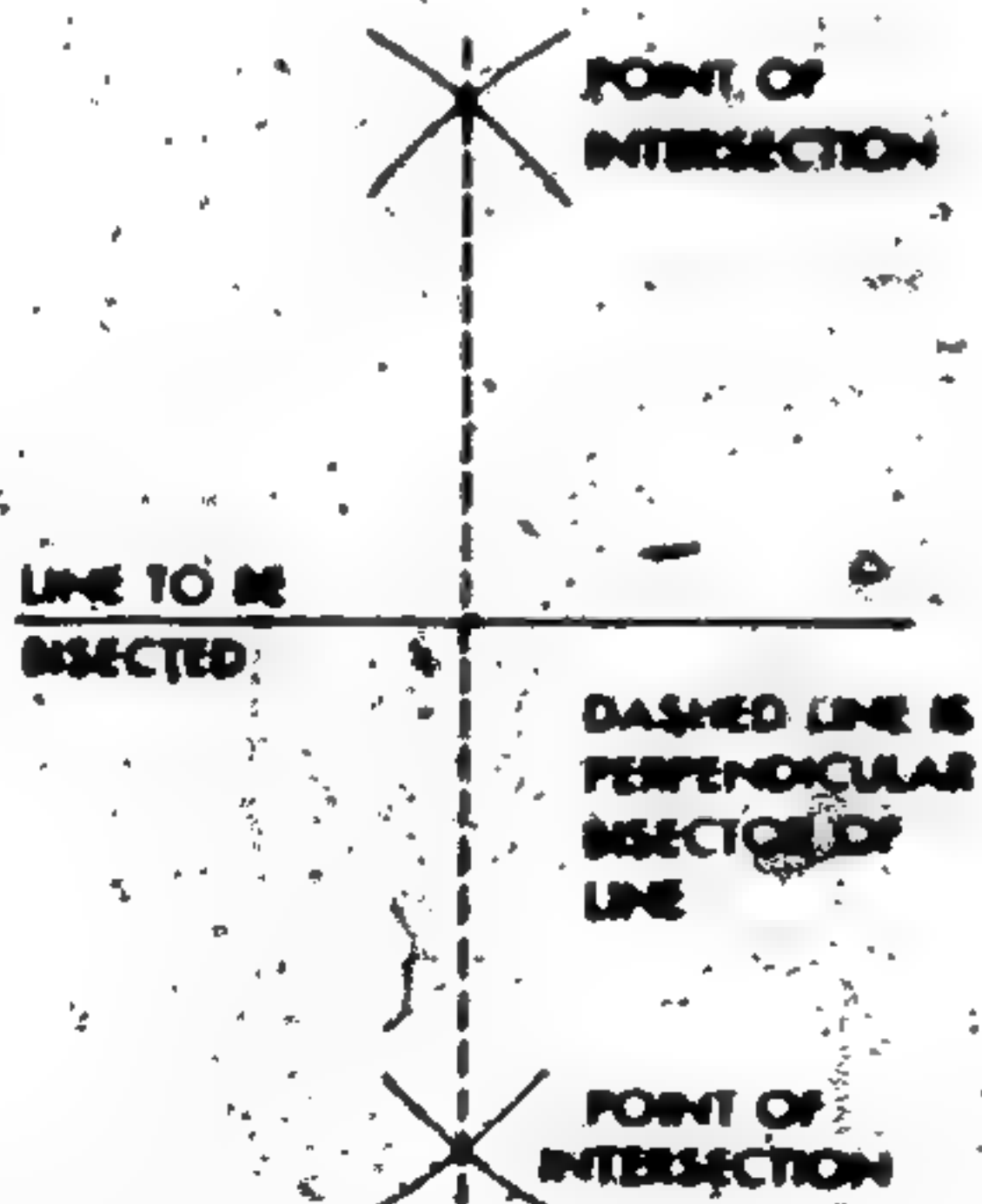
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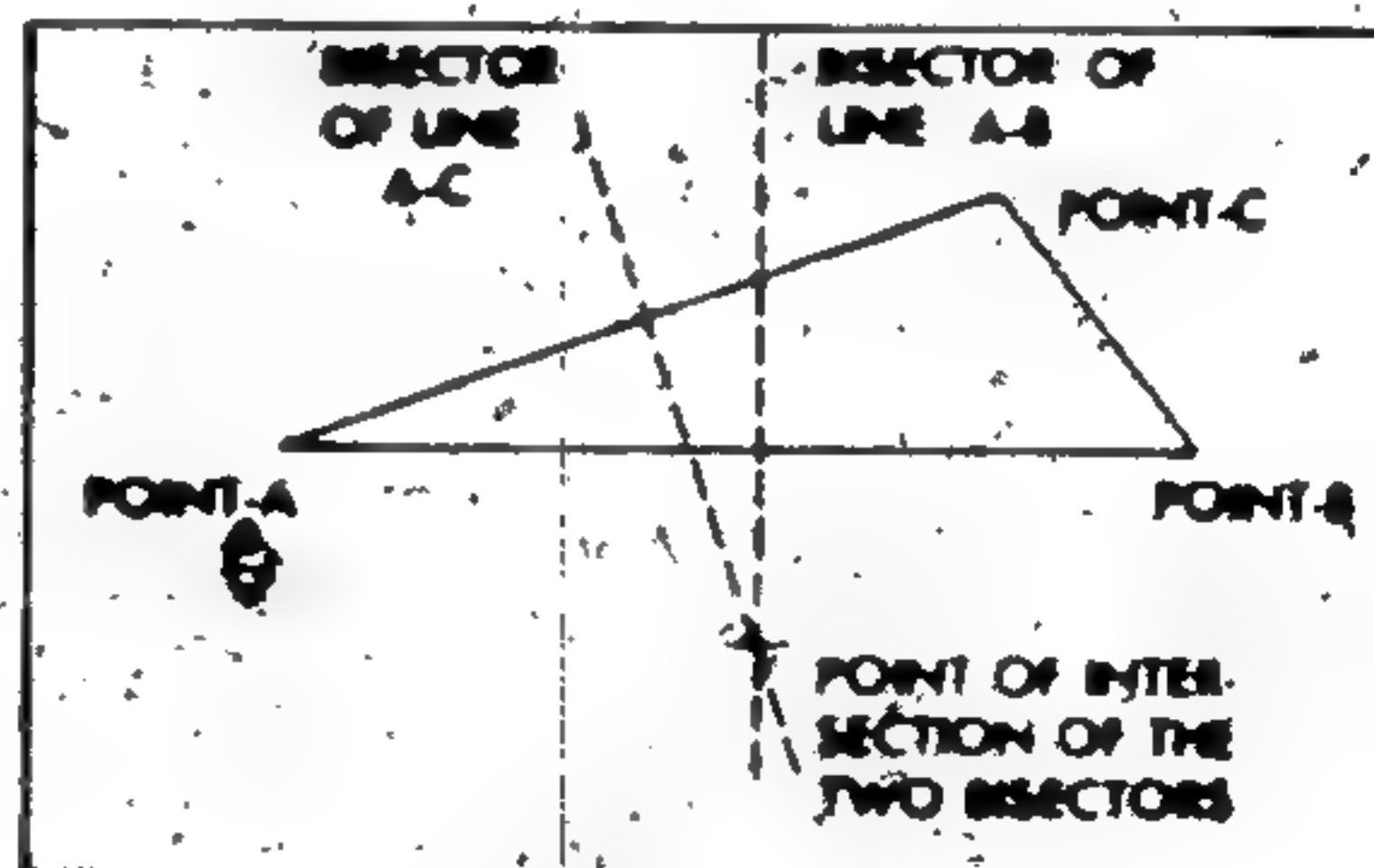
a



b



c



d

Neg. 502807

Figure 7. Determining projectile caliber by geometric analysis of fragment.

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(1) Select two points A and B, illustrated in a of figure 7, as far apart as possible on the circumference of the projectile fragment.

(2) Measure the distance between points A and B with dividers or any other suitable instrument and plot this measurement on paper (a and b of fig 7).

(3) Select a third point (C) on the arc fixed by points A and B and measure the distance from point A to point C. Using this distance as the radius, swing an arc about point A on the paper illustrated in b of figure 7.

(4) Measure the distance on the fragment from point B to point C. Using this distance as the radius, swing an arc about point B on the paper.

(5) Mark the intersection of the two arcs; this is the plot of point C.

(6) Draw the triangle thus formed, using points A, B, and C as the vertices. Erect perpendicular bisectors to the longest sides of the triangle as illustrated in d of figure 7.

Note: To construct a perpendicular bisector of a line, set off a radius greater than one-half the length of the line. With this radius, swing arcs (one on each side of the line) from each end of the line. The line connecting the two points of intersection of the arcs is the perpendicular bisector (c of fig 7).

(7) Measure the distance from the point of intersection of the two perpendicular bisectors to any one of the vertices of the triangle. Multiply this distance by two, and the result is the diameter of the projectile from which the fragment originated.

#### 11. Determination of Caliber by Analysis of Rotating Band Seat Fragments

a. General. Past experience has shown that the most readily identified type of fragment is that which includes a portion of the rotating band seat. Frequently, a fragment of this type can be identified very quickly by direct comparison with figures 8 through 11 or with the detailed drawings in section III. The keying design of the rotating band seat will also be impressed on the inner surface of the rotating bands; however, consideration must be given to the likelihood of distortion of rotating bands that are made of soft metal. Also, consider that projectiles of different calibers often have the same type of keying design



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on the band seat, although the dimensions of the design and the seat will vary in the different calibers. Additionally, some band seats are undercut, and the soft-metal rotating band fits into the seat to form a dovetail joint. Thus, the width of such a band seat is greater at the base (toward the interior of the projectile body) than at the surface of the projectile body.

b. Country of Origin. The rotating band seat and the method of keying the rotating band to the seat frequently indicate the country of origin and the weapon firing the projectile. Figures 8 through 11 (various types of band seats and keying methods used by foreign countries) should not be interpreted to mean that only the country designated uses that particular band seat and keying method. The same types are often used by more than one country.

c. Soviet Rotating Band Seats. An examination of Soviet artillery projectiles indicates that the vertically indented band seat predominates. This is a simple, reliable, and relatively easy method of seating rotating bands. The number of rotating bands may vary from one or two for light and medium caliber projectiles to triple and quadruple bands for heavy caliber projectiles. The number of vertical indentations per inch may vary from approximately 12 to 28. Soviet band seats having 12, 13, 14, 16, 17, 18, 19, 21, 22, 23, 24, 25, and 28 indentations per inch are currently in use. The arrangement of the indentation varies from single rows under small caliber projectile bands to double rows under medium and large caliber bands. The length of the individual indentation varies from 0.05 inch in a double-row arrangement to as much as 0.5 to 0.75 inch in a single-row arrangement. Soviet projectiles with one wide and one narrow rotating band have been examined; the seat of the wide banded projectile has a double row of indentations. All Soviet 85-mm projectiles have been found to have two rotating bands with double rows of indentations under each band; 100-mm projectiles have one wide band with a double row of indentations and one narrow band with a single row of indentations, or two wide or narrow bands with a single row of indentations under each band. The 57-mm projectiles have one band with a single row of indentations, or two wide or narrow bands with a single row of indentations under each band.

d. Rotating Band Seats on High-Velocity Projectiles. Observe closely the design of band seats on Soviet 57-, 85-, and 100-mm projectile drawings shown in section III. These projectiles are used in modern high-velocity antitank, tank, and self-propelled guns, and the rotating bands are seated in a manner that enables them to withstand high initial velocities without being stripped from the projectile.

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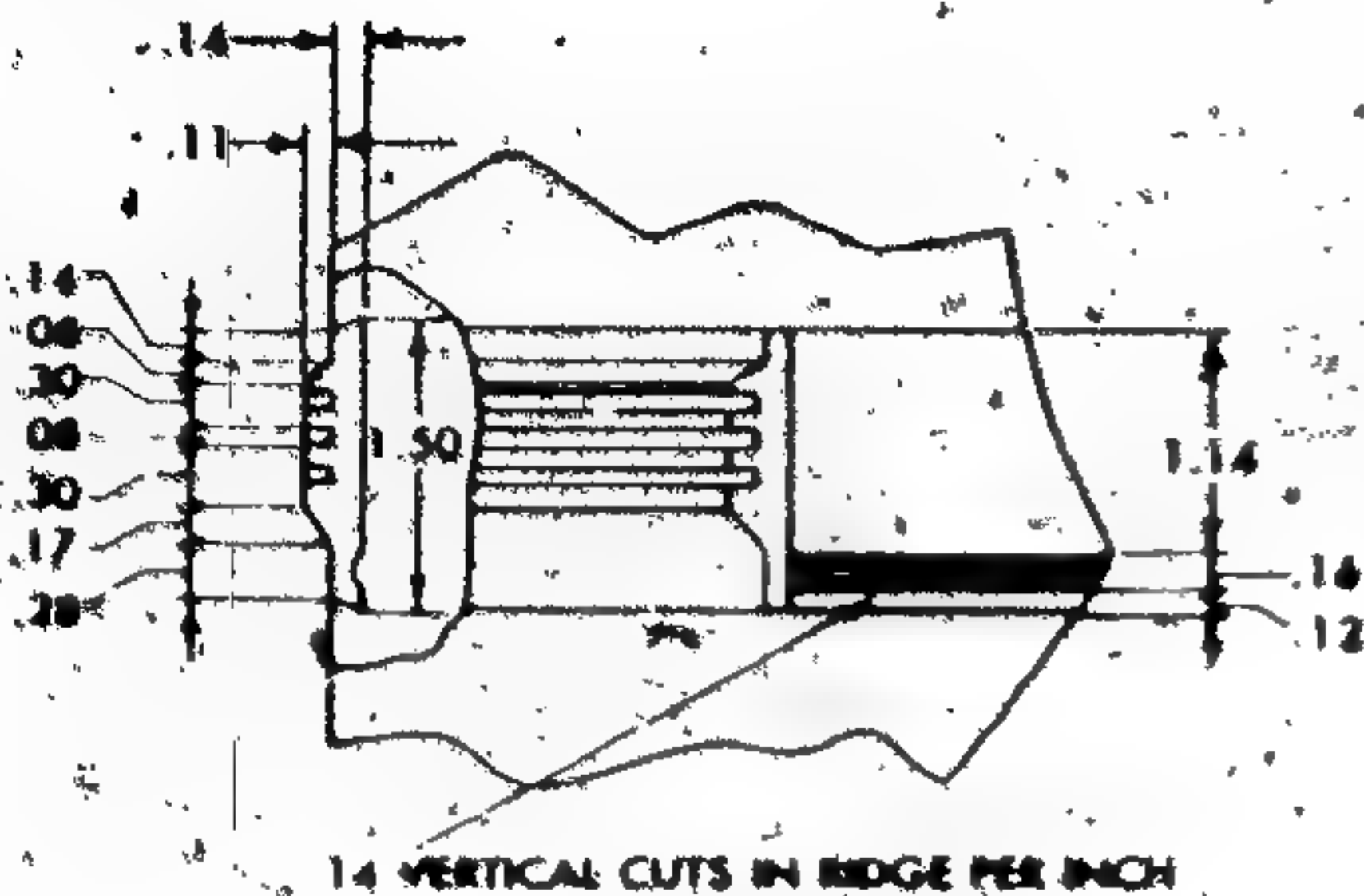


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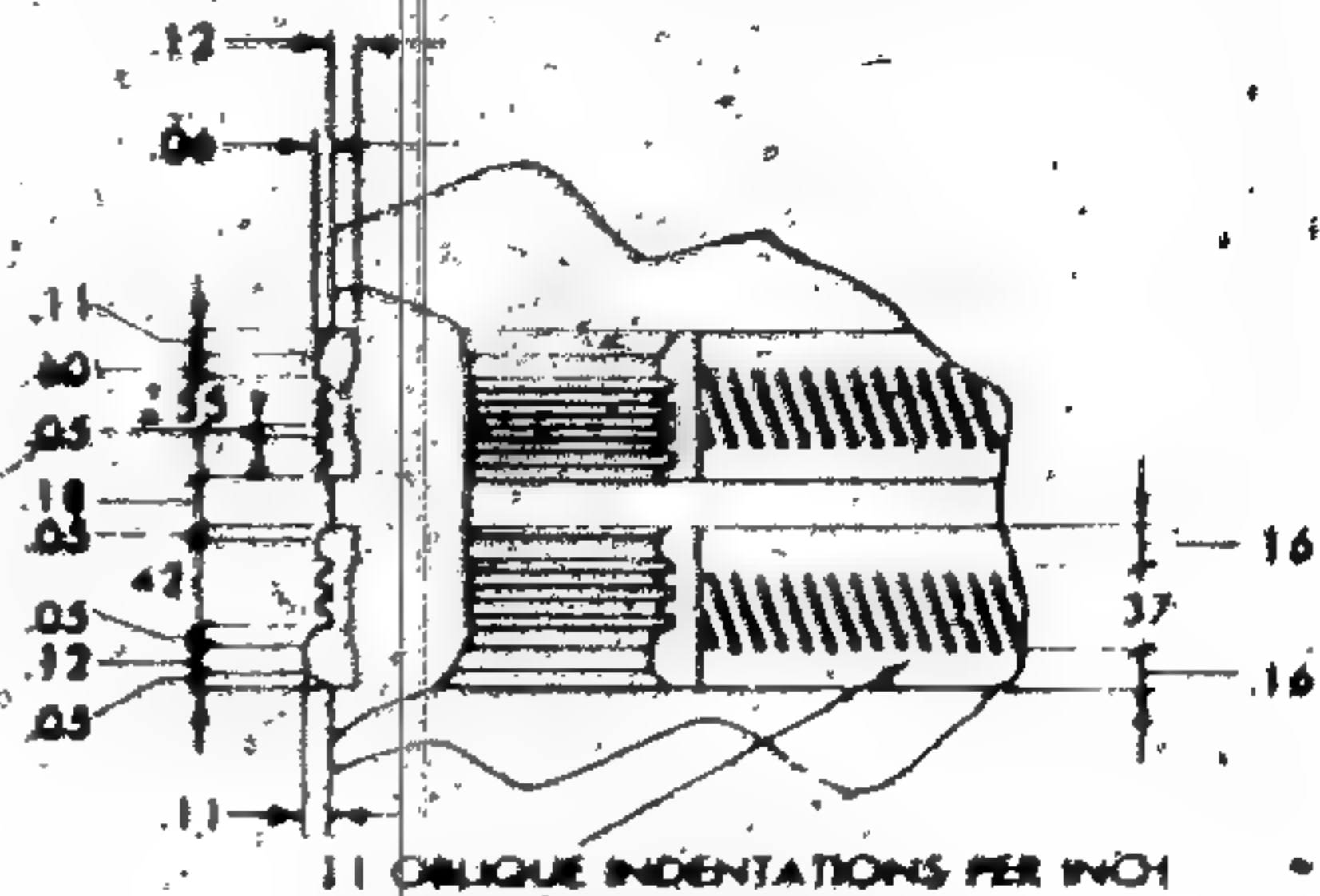
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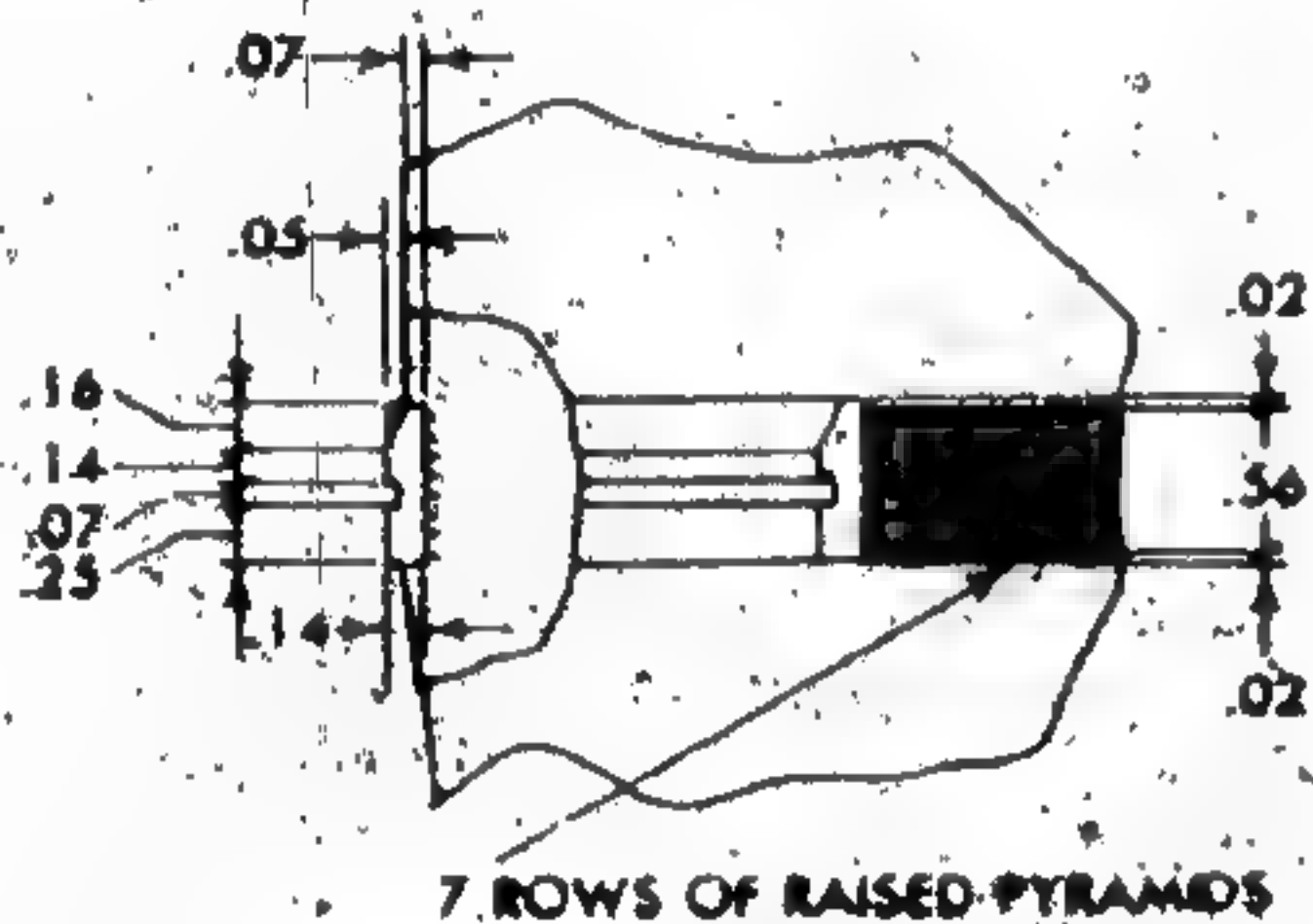
FRENCH HE PROJECTILE  
FOR 155-mm GUNS



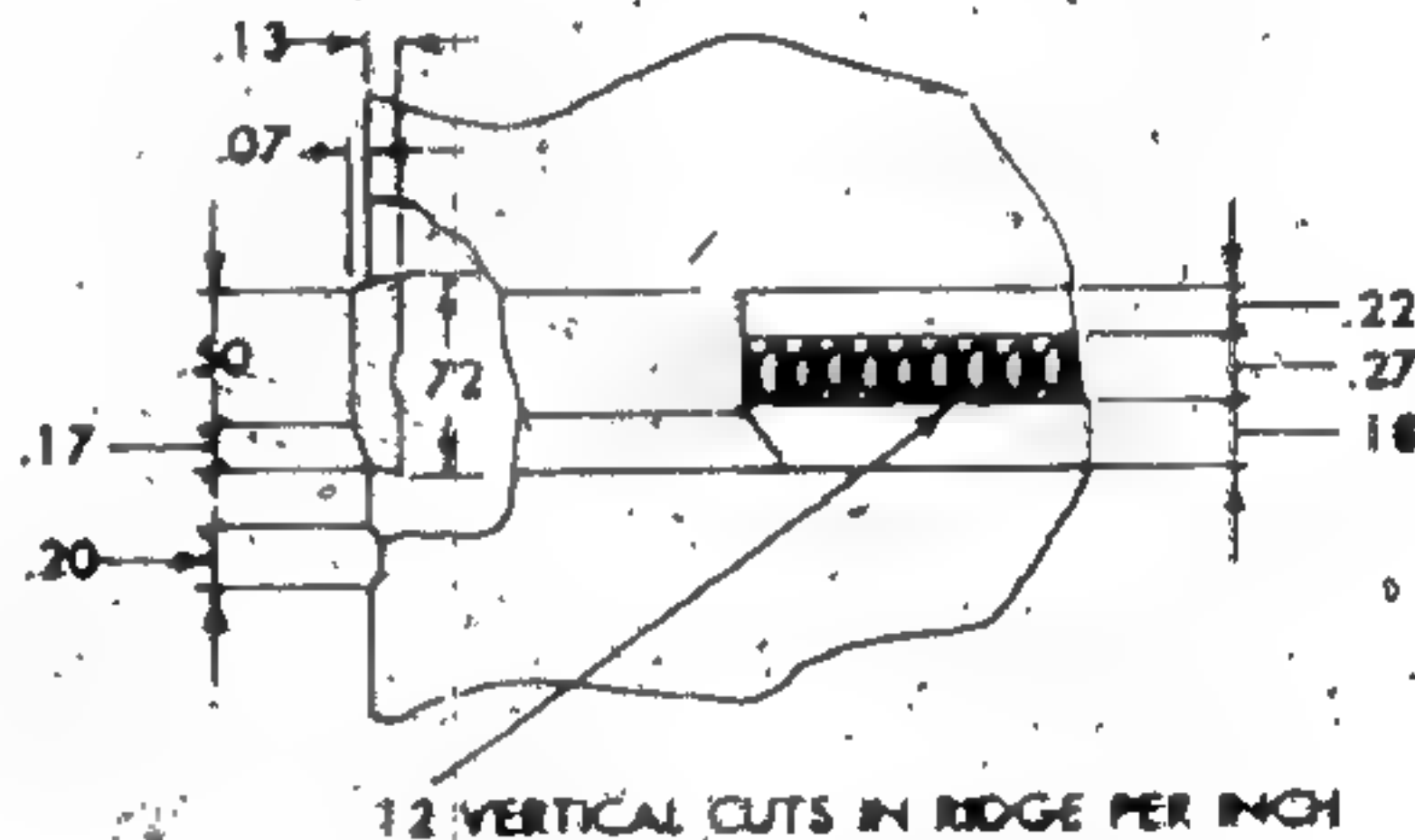
FRENCH HE PROJECTILE  
FOR 105-mm GUNS



POLISH HE PROJECTILE  
FOR 100-mm HOWITZERS



SOVIET HE PROJECTILE  
FOR 76-mm GUNS



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ALL DIMENSIONS IN INCHES

Figure 8. French, Polish, and Soviet rotating bands and seats.

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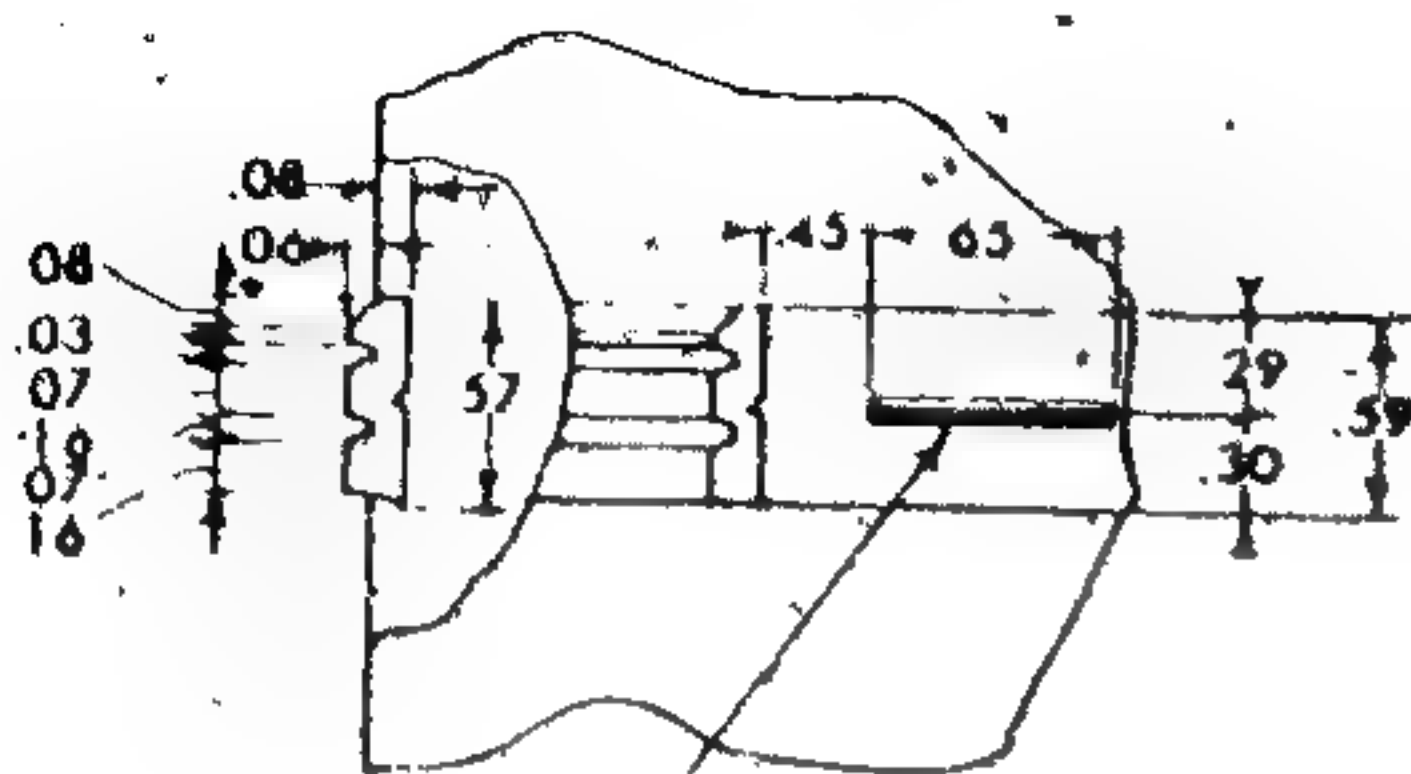


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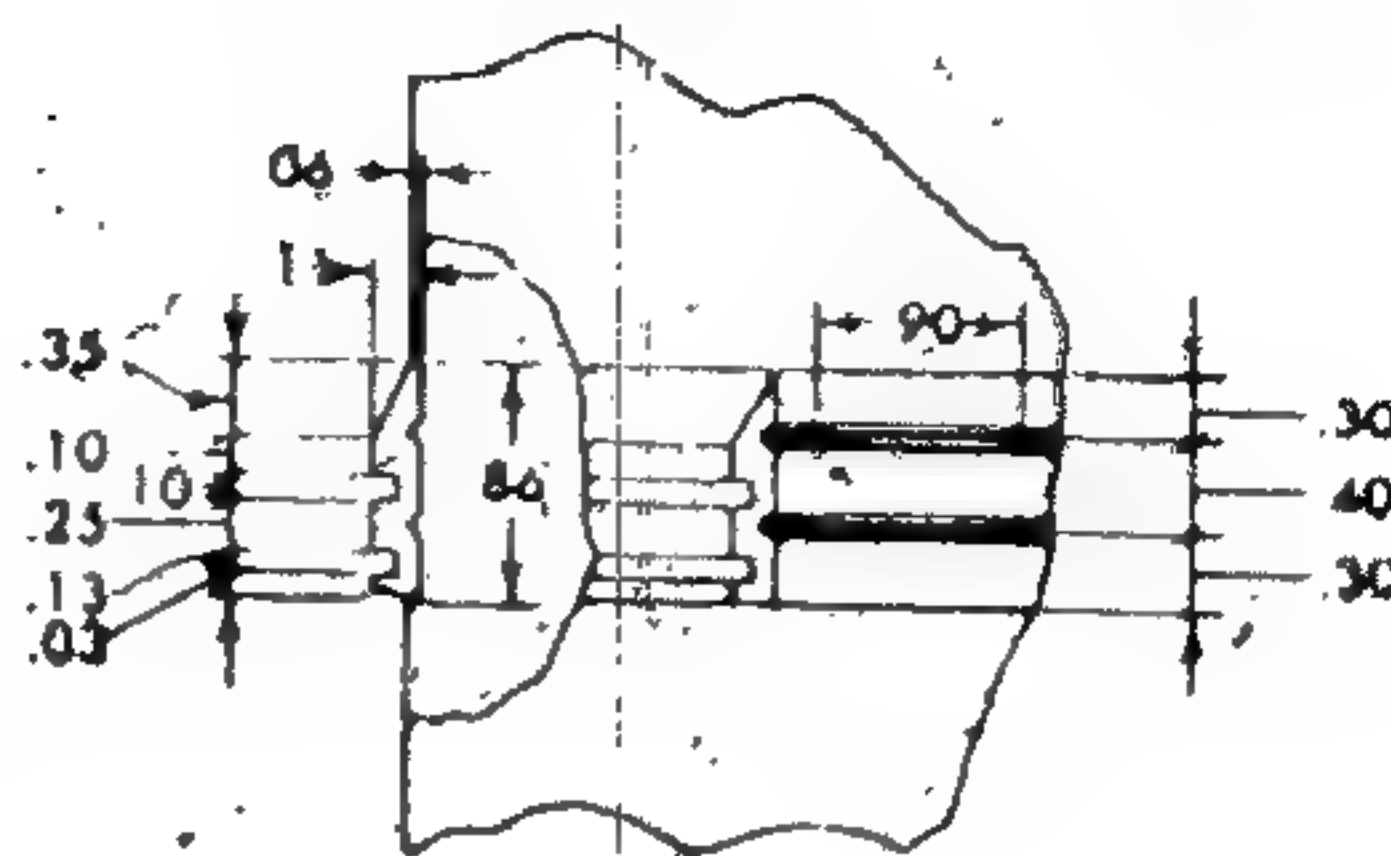
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### DUTCH HE PROJECTILE FOR 75-mm GUNS

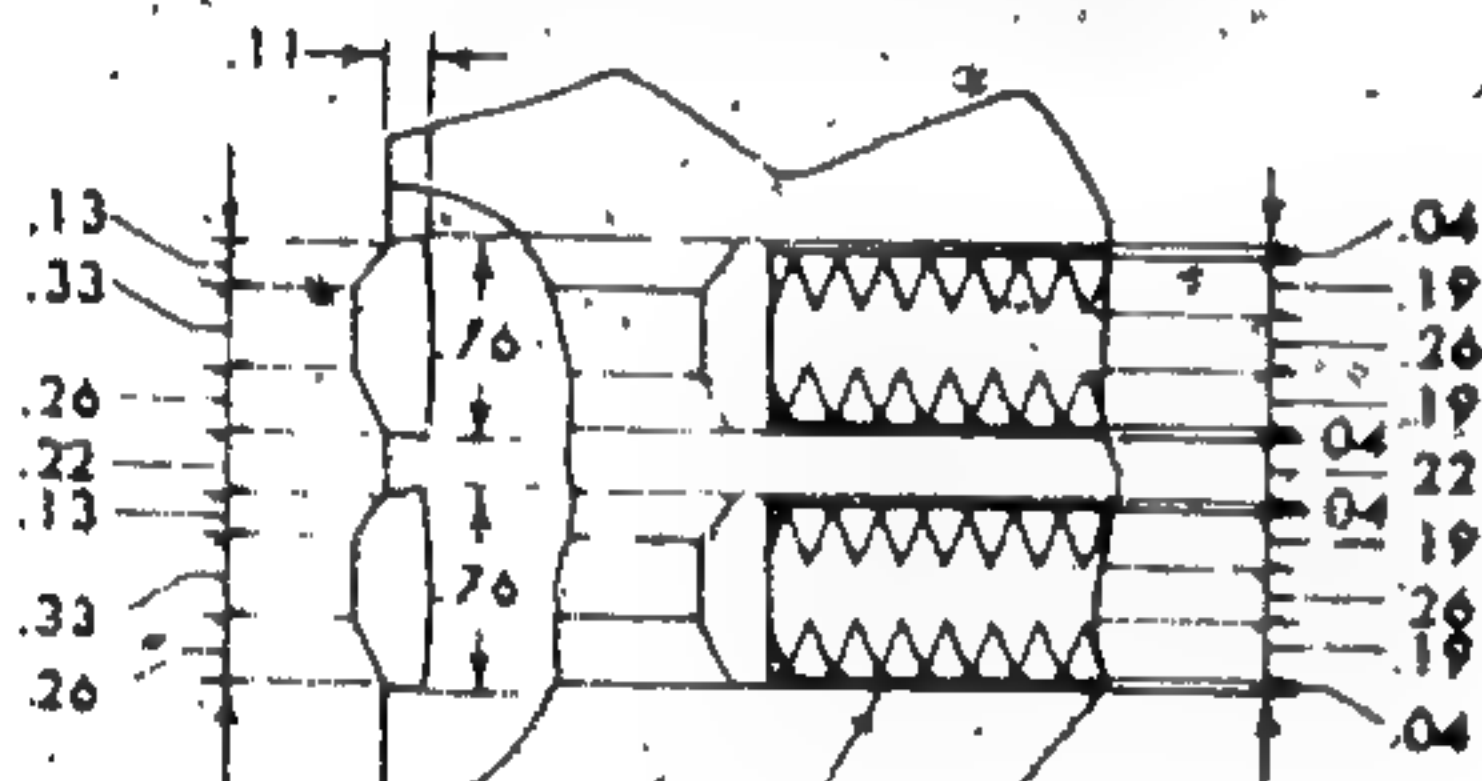


MILLED RIDGE BROKEN AT REGULAR INTERVALS

### JAPANESE HE PROJECTILE FOR 80-mm GUNS

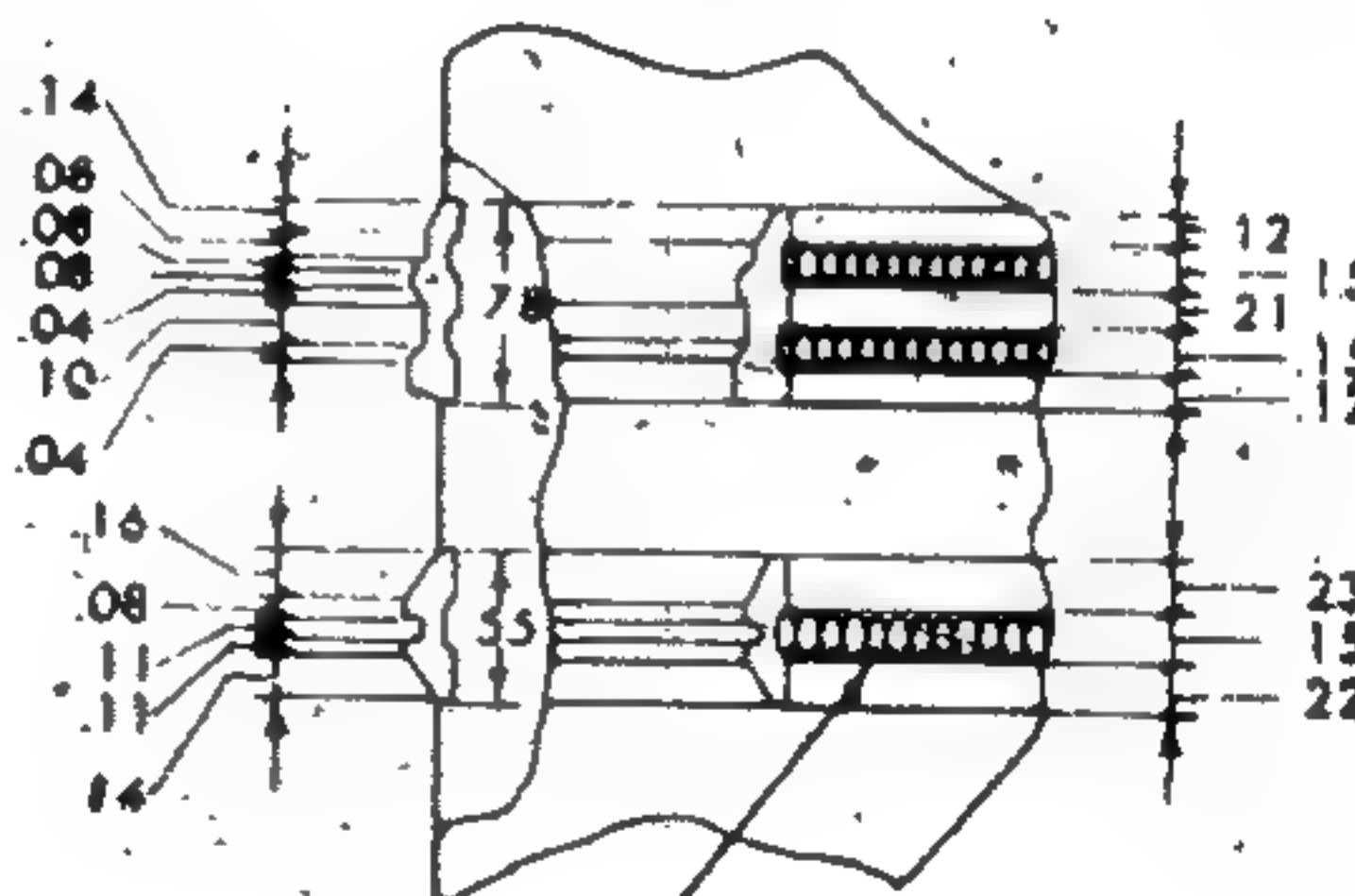


### GERMAN AP. PROJECTILE FOR 105-mm GUNS



13 INDENTED CUTS PER INCH

### CZECHOSLOVAKIA AP PROJECTILE FOR 83.5-mm GUNS



16 VERTICAL CUTS IN RIDGE

Neg. 502809

ALL DIMENSIONS IN INCHES

Figure 9. Dutch, Japanese, German, and Czechoslovak rotating bands and seats.

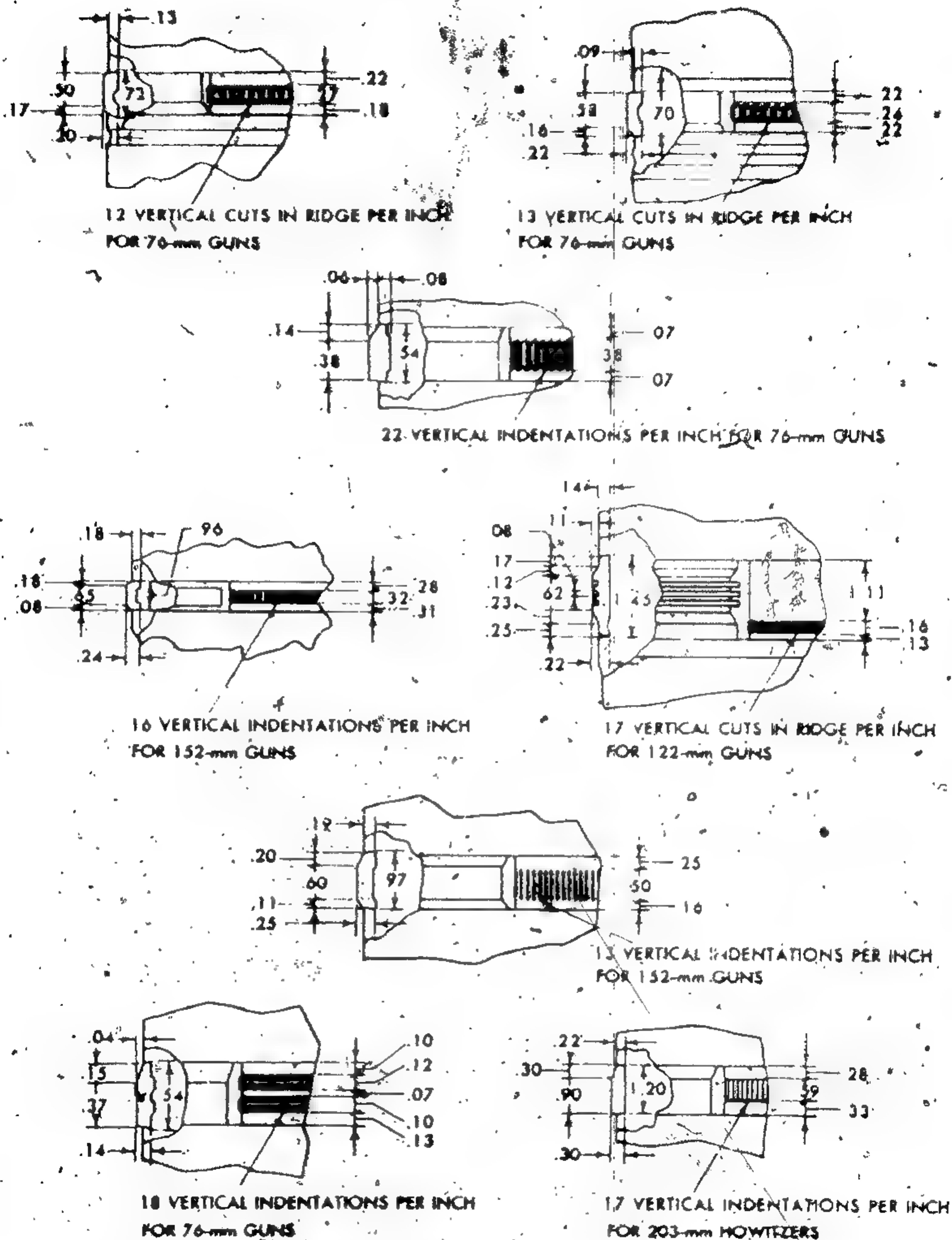
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ALL DIMENSIONS IN INCHES

Figure 10. Rotating bands and seats on Soviet 76-, 122- and 152-mm gun and 203-mm howitzer projectiles.

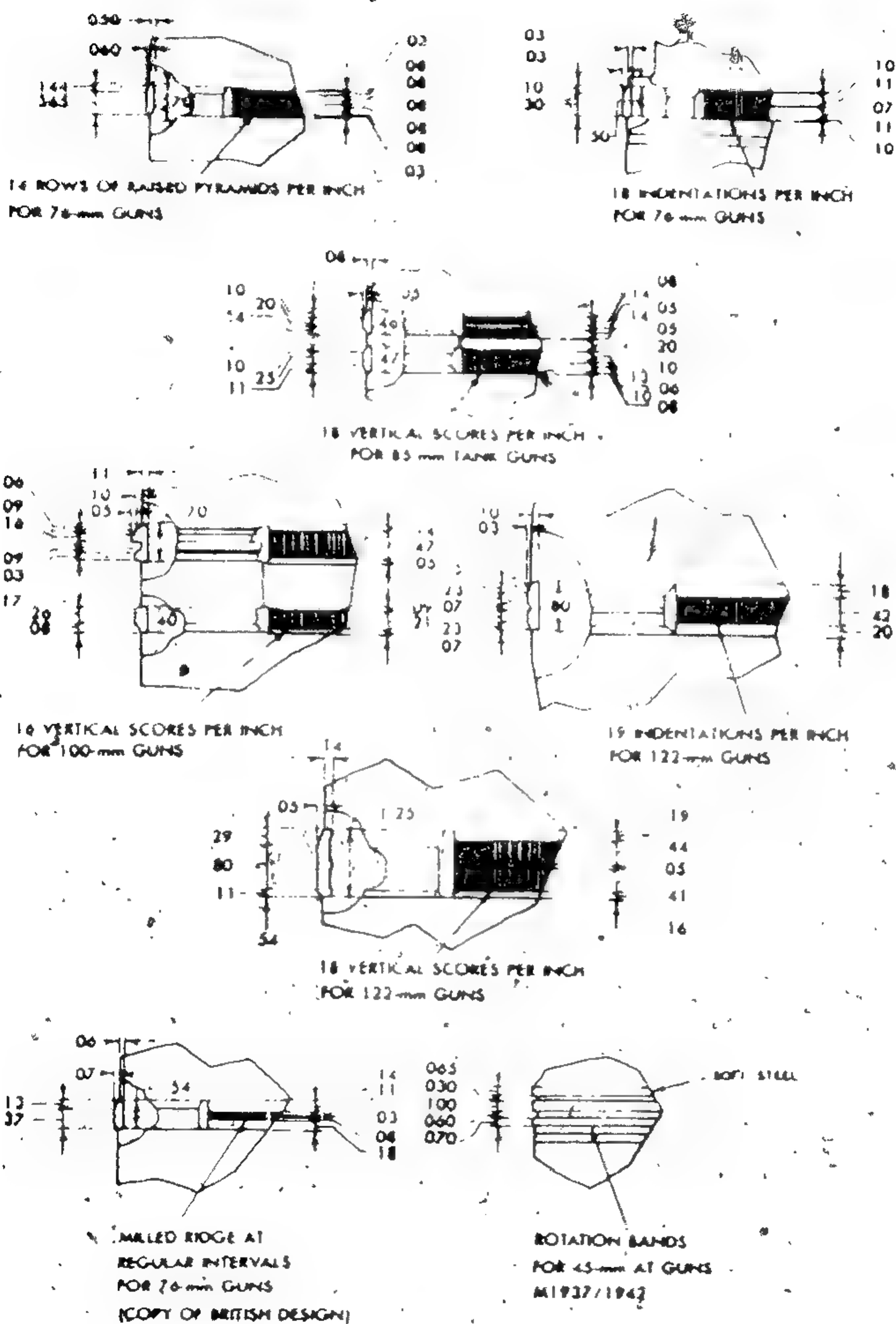
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Figure 11. Rotating bands and seats on Soviet 45-, 76-, 85-, 100-, and 122-mm gun projectiles.

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Section II.

READY REFERENCE PROJECTILE IDENTIFICATION TABLES I THROUGH XIII

1. GENERAL

This section includes 13 tables listing critical dimensions and projectiles arranged for rapid reference (order of priority for Communist countries and alphabetical for free world countries).

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### Page

#### XI. WALL THICKNESS (Continued)

##### Free World Countries:

Belgium	120
Finland	120
France	120
Germany	121
Israel	121
Italy	121
Sweden	122

#### XII. THREAD COUNT

##### Eurasian Communist Countries:

USSR	123
PRC	127
Czechoslovakia	129
North Vietnam	129
North Korea	129
Poland	129
Yugoslavia	130

##### Free World Countries:

Belgium	130
Canada	130
Finland	130
France	130
Germany	131
Israel	131
Italy	131
Sweden	131

#### XIII. FINS (PINNED PROJECTILES)

##### Eurasian Communist Countries:

USSR	133
PRC	134
Czechoslovakia	134
North Vietnam	135
North Korea	135
Poland	135
Yugoslavia	135

##### Free World Countries:

Belgium	135
Finland	135
France	135
Israel	136
Italy	136
Sweden	136



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## 2. EXPLANATION OF TABLES

a. Table I. Base Plug. This table includes only projectiles having base plugs or removable plates, as in the case of propaganda rounds with base ejection systems or high explosive rounds wherein the explosive fillers are loaded through the bases. Base fuze rounds are usually not in this category.

b. Table II. Boattrail. Projectile must possess a discernible angled (boat-tailed) base section to be considered for this table. There must be a definite taper.

c. Table III. Cannelure. Cannelures, ringlike grooves usually near the base of the projectile, are often part of the rotating band itself. These grooves serve many purposes, but they are primarily for crimping the cartridge case to the projectile. Many projectiles do not have a cannellure but depend solely on a tight crimp between cartridge case and projectile.

d. Table IV. Rotating Band and Seat. All spin stabilized projectiles possess a rotating band which may be made of copper, sintered iron, plastic, etc. Fin-stabilized projectiles fired from smoothbore systems are equipped with obturating or gas check bands. These are made of the same materials as rotating bands. This table pertains to any type of band used to impart spin to the projectile or to check gas leakage around the projectile.

e. Table V. Bourrelet. Almost all projectiles have a bourrelet or bore riding surface somewhere along the body. The bourrelet is usually located just below the ogive and is larger than the projectile body. A projectile may have more than one bourrelet. For purposes of this table the "distance rotating band to bourrelet" (6th column on Table V) is the distance from the uppermost band to the lower edge of the bourrelet.

f. Table VI. Ogive. The ogive is the curved or tapered front portion of the projectile excluding the fuze (in this case also the fuze adaptor). In this study the ogive will be the surface from the forward bourrelet to the projectile tip or nose, discounting the fuze or its adaptor. This surface will include windshields and ballistic caps.

g. Table VII. Nose; Table VIII. Fuze. These tables are self-explanatory.

h. Table IX. Projectile Length. The fourth column "base to band upper edge" is the distance from the projectile base, excluding the tracer, to the forward edge of the uppermost rotating band. The fifth column "rotating band to top of bourrelet" is the distance from the forward edge of the uppermost rotating band to the forward edge of the uppermost bourrelet.

i. Table X. Projectile Diameter. This table is self explanatory.

j. Table XI. Wall Thickness. The fourth column "center of base" refers to those projectiles having flat bases. Rockets, base fuze rounds, and projectiles with base extensions are excluded from this category.

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k. Table XII. Thread Count. This table is self-explanatory.

l. Table XIII. Fins. The fifth column "maximum diameter of fins" refers to the in-flight position of the fins. The seventh column "number of rows of vents" is a count of the rows of vents as they appear peripherally around the fin shaft.

3. MEASUREMENT CONVERSION EXAMPLES (see also appendix II)

a. Millimeters to Inches. Multiply number of millimeters by 0.03937:  
 $20 \text{ mm} \times 0.03937 = 0.7874 \text{ inch}$

b. Inches to Millimeters. Multiply number of inches by 25.4:  
 $20 \text{ inches} \times 25.4 = 508 \text{ millimeters}$

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Table I. Base Plug

Projectile			Diameter of plug (in)	Thickness of plug (in)	Length of threaded portion (in)	Figure No.
Caliber (mm)	Type	Identification				
EURASIAN COMMUNIST COUNTRIES						
USSR						
122	HE	F-460	4.095	1.225	0.925	78
122	Prop	A-462	4.76	0.80	0.45	87
130	Frag-HE	OF/3S-42	3.54	1.38	1.18	98
CZECHOSLOVAKIA						
122	Prop	?	4.76	0.80 (est)	0.50	134a
FREE-WORLD COUNTRIES						
FRANCE						
120	HE	PRPA	3.77	1.938	0.813	167
GERMANY						
88	HE	L/4.5	2.71	1.325	0.985	172
SWEDEN						
84	HEAT	M48	3.381	1.84	0.85	184
84	HEAT	M59	2.55	1.04	0.49	185

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Table II. Boattrail

Projectile			Surface length (in)	Diameter (in)		Angle (deg)	Figure No.
Caliber (mm)	Type	Identification		Base	Top		
EURASIAN COMMUNIST COUNTRIES							
USSR							
37	Frag-T	OK-167	0.43	1.25	1.437	8	12
37	Frag-T	OR-167N	0.37	1.33	1.44	9	12a
37	HEI-T	OZT	0.66	1.30	1.435	9	14
37	AP-T	BZT	0.23	1.325	1.437	8	15
45	AP	B-240	0.60	1.524	1.766	13	17
45	AP-T	BR-240	0.75	1.43	1.767	9	18
45	API	BZ-240	0.61	1.57	1.765	10	19
57	AP-T	BR-271K	0.15	2.13 (est)	2.18	9	27
57	AP-T	BR-271SP	0.17	2.12	2.20	6	28
76	Frag	O-350A	1.90	2.33	2.951	9	36
76	Frag-HE	OF-350	1.95	2.34	2.94	8	37
76	Frag-HE	OF-350A	2.00	2.30	2.95	8	38
76	Shrap	Sb-361	1.58	2.44	2.95	10	40
76	HEAT	BP-353A	1.37	2.62	2.92	4	41
76	HEAT	BP-350M	1.94	2.407	2.948	10	42
76	AP-T	BR-350	0.70	2.58	2.947	2	43
76	AP-T	BR-350A	0.73	2.55	2.951	4	44
76	AP-T	BR-350B	0.72	2.734	2.95	9	45
76	AP-T	BR-350B	0.79	2.775	2.94	6	46

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Table II. Boattail (Continued)

Projectile			Surface length (in)	Diameter (in)		Angle (deg)	Figure No.
Caliber (mm)	Type	Identifi- cation		Base	Top		
EURASIAN COMMUNIST COUNTRIES (Continued)							
USSR (Continued)							
76	API-T	BZR-350B	0.75	2.63	2.947	3	47
85	Frag	O-365	1.82	2.81	3.30	10	58
85	Frag	O-365	2.92	2.807	3.30	8	59
85	Frag	O-365K	1.75	2.807	3.30	8	60
85	AP-T	BR-365	1.73	2.80	3.297	8	61
85	AP-T	BR-265K	1.70	2.725	3.295	9	62
100	HE	F-412	1.40	3.47	3.890	6	65
100	AP-T	BR-412	1.43	3.590	3.896	6	66
100	AP-T	BR-412B	1.40	3.46	3.89	8	67
100	Frag-HE	OF-412	1.44	3.42	3.90	10	69
100	Frag	O-415	1.45	3.45	3.90	10	69a
122	Frag	O-460A	3.02	3.75	4.720	10	79
122	Frag-HE	OF-462	3.26	3.73	4.75	8	80
122	Frag-HE	OF-462	3.222	3.56	4.755	9	81
122	Frag-HE	OF-462	2.52	3.717	4.793	9	82
122	Smoke	D-462	3.27	3.78	4.76	9	83
122	Frag-HE	OF-471N	1.84	4.00	4.76	9	84
122	Frag-HE	OF-471N	1.87	4.15	4.764	9	85
122	Prop	A-462	0.802	4.648	4.760	4	87

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Table II. Boattail (Continued)

Projectile			Surface length (in)	Diameter (in)		Angle (deg)	Figure No.
Caliber (mm)	Type	Identification		Base	Top		
EURASIAN COMMUNIST COUNTRIES (Continued)							
USSR (Continued)							
122	HEAT	BP-460A	0.44	4.647	4.745	7	88
122	AP-T	BR-471	1.73	4.26	4.75	8	89
122	AP-T	BR-471B	1.77	4.234	4.754	8	90
122	Frag-HE	OF-472	1.84	4.22	4.76	9	91
130	Frag-HE	?	2.175	4.85	5.069	9	94
130	AP	?	2.19	4.400	5.065	8	95
130	Frag HE	OF-482M	1.13	4.984	5.08	6	96
130	APC-T	BR-482B	1.48	4.64	5.08	9	97
130	Frag-HE	OF-3S-42	1.26	4.64	5.08	10	98
152	Frag-HE	OF-540	3.04	5.00	5.99	9	100
152	Frag-HE	OF-540	3.09	5.04	5.83	7	101
152	CP	G-530	3.09	4.92	5.93	9	102
203	CP	G-620	5.47	6.24	7.89	9	104
280	CP	G-674	7.90	8.528	10.941	9	105
PRC							
75	HE	94	?	2.75	2.94	6	113
75	HE	26.8	1.01	2.44	2.78	9	114
75	HE	26.12	1.01	2.44	2.66	9	115
75	HE	?	0.92	2.44	2.78	10	116

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Table II. Hosts (Continued)

Projectile			Surface length (in)	Diameter (in)		Angle (deg)	Figure No.
Caliber (mm)	Type	Identifi- cation		Base	Top		
EURASIAN COMMUNIST COUNTRIES (Continued)							
PRC (Continued)							
75	HEAT	T	0.97	2.475	2.776	9	117
105	HE	91	2.14	3.55	4.10	7	130
CZECHOSLOVAKIA							
37	HEI-T	OZT	0.40	1.24	1.438	14	135
37	AP-T	BZT	0.23	1.357	1.435	10	136
85	Frag	OF	1.63	2.76	3.30	10	140
100	HE	OF	1.38	2.42	3.89	9	141
POLAND							
122	Frag-HE	OF-462	3.23	3.78	4.76	9	150
YUGOSLAVIA							
76	HE	OF-350	1.92	2.34	2.952	9	151
FREE-WORLD COUNTRIES							
FRANCE							
90	HEAT	62	0.77	3.41	3.59	6	161
105	HE	7	3.01	3.53	4.128	5	163
105	HEP	7	1.71	3.45	4.12	12	164
105	HEAT	61 OCC	1.21	3.808	4.125	5	165

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Table II. Boattail (Continued)

Projectile			Surface length (in)	Diameter (in)		Angle (deg)	Figure No.
Caliber (mm)	Type	Identification		Base	Top		
FREE-WORLD COUNTRIES (Continued)							
FRANCE (Continued)							
120	HE	PRPA	4.77	3.77	4.787	6	167
155	HE	?	7.74	4.32	6.095	7	170
155	HE	?	3.02	5.33	6.04	8	171
ISRAEL							
88	HE	?	2.13	2.71	3.44	9	180
88	HE	?	2.26	2.25	3.42	9	180a
SWEDEN							
40	HE	MKI1	0.98	0.937	1.547	8	182

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Table III. Cannelure

Projectile			Number	Width (in)	Distance from base (in)	Figure No.
Caliber (mm)	Type	Identifi- cation				
EURASIAN COMMUNIST COUNTRIES						
USSR						
37	Frag-T	OR-167	2	0.18 0.17	0.56 0.98	12
37	Frag-T	OR-167N	2	0.16 0.16	0.54 0.97	12a
37	AP-T	BR-167	2	0.167 0.186	0.298 0.717	13
37	HEI-T	OZT	1	0.153	0.827	14
37	AP-T	BZT	2	0.163 0.163	0.739 0.306	15
45	Frag	O-240	1	0.10	4.45	16
45	AP	B-240	1	0.122	0.975	17
45	AP-T	BR-240	2	0.177 0.085	0.863 0.140	18
45	AP	BZ-240	1	0.20	0.80	19
45	HVAP-T	BR-240P	2	0.085 0.08	0.24 0.48	20
57	Frag	O-271U	1	0.196	3.101	24
57	Frag	O-271U	1	0.19	3.10	25
57	AP-T	BR-271	1	0.152	0.703	26
57	AP-T	BR-271K	1	0.21	0.78	27
57	AP-T	BR-271SP	1	0.145	0.808	28
57	HVAP-T	BR-271P	1	0.22	0.30	29
57	Frag-T	OR-281	2	0.20 0.20	0.35 0.95	30
57	APC-T	BR-281	2	0.13 0.13	0.55 0.21	31

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Table III. Cannelure (Continued)

Projectile			Number	Width (in)	Distance from base (in)	Figure No.
Caliber (mm)	Type	Identifi- cation				
EURASIAN COMMUNIST COUNTRIES (Continued)						
USSR (Continued)						
57	APC-T	BR-281U	2	0.24 0.24	0.54 0.20	31a
57	Frag-T	OR-281U	2	0.29 0.29	0.94 0.43	32
76	HE	F-354F	1	0.146	0.427	33
76	HE	F-354F	1	0.111	0.419	34
76	HE	F-354G	1	0.095	0.395	35
76	Shrap	Sh-354G	1	0.127	0.411	39
76	Shrap	Sh-361	1	0.26	1.87	40
76	HEAT	BP-353A	3	0.19 0.19 0.19	1.71 2.06 2.93	41
76	AP-T	BR-350	1	0.20	1.068	43
76	AP-T	BR-350A	1	0.15	1.17	44
76	AP-T	BR-350B	1	0.15	1.1	45
76	AP-T	BR-350B	1	0.20	1.1	46
76	API-T	BZR-350B	1	0.21	1.10	47
76	HVAP-T	BR-354P	1	0.211	0.443	48
76	HVAP-T	BR-354P	1	0.23	0.47	49
85	Frag	O-365	2	?	1.75 1.75	58
85	Frag	O-365	2	0.229 0.211	2.752 3.119	59
85	Frag	O-365K	2	0.213 0.224	1.768 2.129	60

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Table III. Cannelure (Continued)

Projectile			Number	Width (in)	Distance from base (in)	Figure No.
Caliber (mm)	Type	Identifi- cation				
EURASIAN COMMUNIST COUNTRIES (Continued)						
USSR (Continued)						
85	AP-T	BR-365	1	0.21	2.136	61
85	AP-T	BR-365K	1	0.154	2.150	62
85	HVAP-T	BR-365P	2	0.21 0.21	0.33 0.69	63
85	HVAP-T	BR-365PK	2	0.22 0.22	0.33 0.70	64
203	CP	G-620	1	0.20	6.00	104
280	CP	G-674	1	0.23	8.43	105
PRC						
57	HE	?	1	0.14	0.48	106
57	HEAT	?	1	0.10	0.709	107
75	HE	26.8	1	0.13	1.48	114
75	HE	26.12	1	0.130	1.48	115
75	HE	?	1	0.13	1.48	116
75	HEAT	?	1	0.215	1.515	117
85	APC-T	367	2	0.50(est) 0.50(est)	0.75(est) 0.75(est)	126b
105	HE	91	1	0.21	2.66	130
CZECHOSLOVAKIA						
37	HXI-T	OZT	2	0.161 0.165	0.965 0.54	135
37	AP-T	BZT	2	0.161 0.165	0.299 0.724	136

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Table III. Cannelure (Continued)

Projectile			Number	Width (in)	Distance from base (in)	Figure No.
Caliber (mm)	Type	Identifi- cation				
EURASIAN COMMUNIST COUNTRIES (Continued)						
CZECHOSLOVAKIA (Continued)						
57	AP-T	?	1	0.197	0.776	137
85	Frag	OF	2	0.18 0.18	2.15 1.81	140
FREE-WORLD COUNTRIES						
CANADA						
76	HVAPDS-T	M331	1	0.235	1.31	156
FRANCE						
90	HEAT	62	1	0.139	0.763	161
100	AP-T	?	1	0.21	0.52	162
105	HEAT	61 OCC	1	0.26	2.81	165
GERMANY						
88	HE	L/4.5	2	0.30 0.30	0.255 0.675	172
88	APC-T	?	2	0.23 0.25	1.565 2.044	173
88	APC-T	?	2	0.23 0.25	1.564 2.044	174
SWEDEN						
40	HE	MKII	1	0.264	1.046	182

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Table IV: Rotating Band and Seat

Projectile			Type of band	Width of rotating band seat (in)	Number of bands	Distance between bands (in)	Knurling identification (per in)	Figure No.
Caliber (mm)	Type	Identification						
EUROPEAN COMMUNIST COUNTRIES								
USSR								
37	Frag-T	OR-167	Copper	0.48	1	—	28	12
37	Frag-T	OR-167N	Copper	0.50	1	—	28	12a
37	AP-T	BR-167	Copper	0.50	1	—	24	13
37	HEI-T	OZT	Copper	0.488	1	—	25.9	14
37	AP-T	BZT	Copper	0.473	1	—	25.6	15
45	Frag	O-240	Copper	0.504	1	—	18	16
45	AP	B-240	Copper	0.57	1	—	20	17
45	AP-T	BR-240	Copper	0.53	1	—	16	18
45	API	BZ-240	Copper	0.49	1	—	20	19
45	HVAP-T	BR-240P	Steel	—	3	0.06 0.03	Solid	20
57	Frag	O-271	Copper	0.49	1	—	18	23
57	Frag	O-271U	Copper	0.44 0.44	2	0.15	18	24
57	Frag	O-271U	Copper	0.47 0.47	2	0.16	16	25
57	AP-T	BR-271	Copper	0.47 0.63	2	0.15	18	26
57	AP-T	BR-271K	Copper	0.50 0.46	2	0.13	16	27
57	AP-T	BR-271SP	Copper	0.43 0.44	2	0.142	16	28
57	HVAP-T	BR-271P	Steel	—	6 grooves	0.75	Solid	29
57	Frag-T	OR-281	Copper	1.06	1	—	21	30

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Table IV. Rotating Band and Seat (Continued)

Projectile			Type of band	Width of rotating band seat (in)	Number of bands	Distance between bands (in)	Knurling indentations (per in)	Figure No.
Caliber (mm)	Type	Identification						
EURASIAN COMMUNIST COUNTRIES (Continued)								
USSR (Continued)								
57	APC-T	BR-281	Copper	1.04	1	—	17	31
57	APC-T	BR-281U	Copper	1.04	1	—	17	31a
57	Frag-T	OR-281U	Copper	1.04	1	—	21	32
76	HE	F-354F	Copper	0.46	1	—	14	33
76	HE	F-354F	Copper	0.56	1	—	13	34
76	HE	F-354C	Copper	0.54	1	—	2 ridges	35
76	Frag	O-350A	Copper	0.57	1	—	16	36
76	Frag-HE	OF-350	Copper	0.54	1	—	18	37
76	Frag-HE	QF-350	Copper	0.54	1	—	22	38
76	Shrap	Sh-354G	Copper	0.55	1	—	28	39
76	Shrap	Sh-361	Copper	0.46	1	—	17.5	40
76	HEAT	BP-353A	Copper	0.70	1	—	13	41
76	HEAT	BR-350M	Copper	0.54	1	—	18	42
76	AP-T	BR-350	Copper	0.50	1	—	18	43
76	AP-T	BR-350A	Copper	0.52	1	—	18	44
76	AP-T	BR-350B	Copper	0.51	1	—	16	45
76	AP-T	BR-350B	Copper	0.52	1	—	16	46
76	API-T	BZR-350B	Copper	0.53	1	—	18	47
76	HVAP-T	BR-354P	Copper	0.50	1	—	18	48
76	HVAP-T	BR-354P	Copper	0.49	1	—	18	49
85	Frag	O-365	Copper	0.43 0.46	2	0.20	18	58



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Table IV. Rotating Band and Seat (Continued)

Projectile			Type of band	Width of rotating band seat (in)	Number of bands	Distance between bands (in)	Knurling indentations (per in)	Figure No.
Caliber (mm)	Type	Identification						
EURASIAN COMMUNIST COUNTRIES (Continued)								
USSR. (Continued)								
85	Frag	O-365	Copper	0.46 0.43	2	0.233	18	59
85	Frag	O-365K	Copper	0.48 0.44	2	0.23	18	60
85	AP-T	BR-365	Copper	0.43 0.43	2	0.225	18	61
85	AP-T	BR-365K	Copper	0.47 0.46	2	0.207	18	62
85	HVAP-T	BR-365P	Copper	0.47 0.48	2	0.19	18	63
85	HVAP-T	BR-365PK	Copper	0.495 0.495	2	0.22	18	64
100	HE	F-412	Copper	0.40 0.70	2	0.833	16	65
100	AP-T	BR-412	Copper	0.336 0.675	2	0.787	18	66
100	AP-T	BR-412B	Copper	0.38 0.68	2	0.88	16;18	67
100	APC-T	BR-412D	Copper	0.62 0.34	2	0.88	16;18	68
100	APC-T	BR-412D	Copper	0.66 0.32	2	0.88	18	68a
100	Frag-HE	OF-412	Copper	0.65 0.35	2	0.90	16	69
100	Frag	O-415	Copper	0.68 0.39	2	0.85	17	69a
122	HE	F-460	Copper	0.80	1	—	24	78
122	Frag	O-460A	Copper	0.77	1	—	18	79

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Table IV. Rotating Band and Seat (Continued)

Projectile			Type of band	Width of rotating band seat (in)	Number of bands	Distance between bands (in)	Knurling indentations (per in)	Figure No.
Caliber (mm)	Type	Identification						
EURASIAN COMMUNIST COUNTRIES (Continued)								
USSR (Continued)								
122	Frag-HE	OF-462	Copper	0.80	1	---	19	80
122	Frag-HE	OF-462	Copper	0.79	1	---	14	81
122	Frag-HE	OF-462	Copper	0.82	1	---	16	82
122	Smoke	D-462	Copper	0.79	1	---	14	83
122	Frag-HE	OF-471N	Copper	1.18	1	---	20	84
122	Frag-HE	OF-471N	Copper	1.25	1	---	21	85
122	Shrap	Sh-462	Copper	0.80	1	---	19	86
122	Prop	A-462	Copper	0.82	1	---	16	87
122	HEAT	BP-460A	Copper	0.814	1	---	12	88
122	AP-T	BR-471	Copper	1.18	1	---	21	89
122	AP-T	BR-471B	Copper	1.25	1	---	18	90
122	Frag-HE	OF-472	Copper	0.96 0.94	2	0.34	17	91
122	APC-T	BR-472	Copper	0.81 0.95	2	0.38	17 16	92
122	HEAT	BK-6M	Sintered iron	0.99	1	---	annular groove	93
130	Frag-HE	OF-482	Copper	0.875	1	---	17	94
130	AP	?	Copper	0.875	1	---	17	95
130	Frag-HE	OF-482M	Copper	0.79 0.79	2	0.36	16	96

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Table IV. Rotating Band and Seat (Continued)

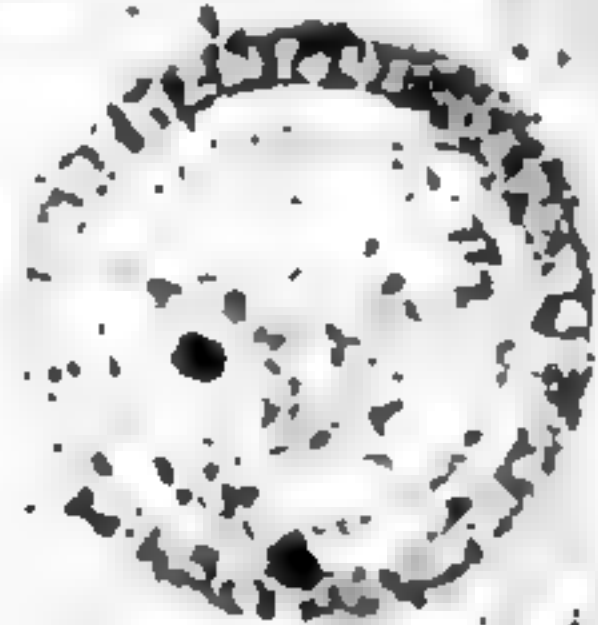
Projectile			Type of band	Width of rotating band seat (in)	Number of bands	Distance between bands (in)	Knurling indentations (per in)	Figure No.
Caliber (mm)	Type	Identification						
EURASIAN COMMUNIST COUNTRIES (Continued)								
USSR (Continued)								
130	APC-T	BR-482B	Copper	0.71 0.71	2	0.35	18	97
130	Frag-HE	OF-3S-42	Copper	0.94 0.78	2	0.31	17	98
152	Frag-HE	OF-540	Copper	0.91	1	---	13	100
152	Frag-HE	OF-540	Copper	0.95	1	---	16	101
152	CP	G-530	Copper	0.96	1	---	16	102
203	CP	G-620	Copper	1.20	1	---	17	104
280	CP	G-674	Copper	1.31	1	---	18	105
PRC								
57	HE	7	Steel	0.40	1	---	Solid	106
57	HEAT	7	Steel	1.313	1	---	Solid	107
70	HE	92	Copper	0.43	1	---	17	111
70	HEAT	3	Copper	0.41	1	---	18	112
75	HE	94	Copper	0.420	1	---	16	113
75	HE	26.8	Copper	0.36	1	---	17	114
75	HE	26.12	Copper	0.375	1	---	17	115
75	HE	7	Copper	0.40	1	---	14	116
75	HEAT	7	Copper	0.340	1	---	10	117
85	APC-T	367	Copper	0.266 0.393	2	0.44 0.44	16 16	1266
105	HE	91	Copper	0.94	1	---	1 ridge	129



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Table IV. Rotating Band and Seat (Continued)

Projectile			Type of band	Width of rotating band seat (in)	Number of bands	Distance between bands (in)	Knurling indentations (per in)	Figure No.
Caliber (mm)	Type	Identification						
EURASIAN COMMUNIST COUNTRIES (Continued)								
PRC (Continued)								
105	HE	91	Copper	0.93	1	---	17	130
122	Prop	?	Copper	0.889 0.881	2	0.34 0.34	17	134a
CZECHOSLOVAKIA								
37	HEI-T	OZT	---	0.488	1	---	26	135
37	AP-T	BZT	---	0.492	1	---	24	136
57	AP-T	?	Sintered iron	0.453 0.438	2	0.162	16	137
85	Frag	OF	Sintered iron	0.47 0.47	2	0.20	15	140
100	HE	OF	Copper	0.68 0.38	2	0.84	16	141
100	APC-T	PSv	Copper	0.66 0.35	2	0.728	17	142
POLAND								
122	Frag-HE	OF-462	Copper	0.79	1	---	22	150
YUGOSLAVIA								
76	HE	OF-350	Copper	1.48	1	---	18	151

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Table IV. Rotating Band and Seat (Continued)

Projectile			Type of band	Width of rotating band seat (in)	Number of bands	Distance between bands (in)	Knurling indentations (per in)	Figure No.
Caliber (mm)	Type	Identification						
FREE-WORLD COUNTRIES								
CANADA								
76	HVAPDS-T	M331	Steel	—	1	—	—	156
FRANCE								
90	HEAT	62	Copper	0.376	1	—	—	161
100	AP-T	?	Copper	0.730 0.730	2	0.460	18	162
105	HE	?	Copper	0.750	1	—	10	163
105	HBP	?	Copper	0.715	1	—	10	164
105	HEAT	61. OCC	Copper	0.68	1	—	—	165
120	HE	PRPA	Steel	0.90	1	—	Solid	167
155	HE	?	Copper	1.06	1	—	10	170
155	HE	?	Copper	1.00	1	—	10	171
GERMANY (WW II DESIGN)								
88	HE	L/4.5	Copper	0.48 0.48	2	0.22	15.5	172
88	APC-T	?	Sintered iron	0.505 0.505	2	0.21	—	173
88	APC-T	?	Iron-copper covered	0.505 0.505	2	0.21	—	174
ISRAEL								
88	HE	?	Copper	0.705	1	—	—	180
88	HE	?	Copper	0.811	1	—	26	180a

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Table IV. Rotating Band and Seat (Continued)

Projectile			Type of band	Width of rotating band seat (in)	Number of bands	Distance between bands (in)	Knurling indentations (per in)	Figure No.
Caliber (mm)	Type	Identification						
FREE-WORLD COUNTRIES (Continued)								
SWEDEN								
40	HE	MKII	Gilding metal	0.633	1	—	10	182
84	HEAT	M48	Copper	0.33	1	—	20	184
84	HEAT	M59	Plastic	0.225	1	—	—	185

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Table V. Bourrelet

Projectile			Diameter of bourrelet (in)	Width of bourrelet (in)	Distance rotating band to bourrelet (in)	Distance bourrelet to nose (in)	Figure No.
Caliber (mm)	Type	Identification					
EURASIAN COMMUNIST COUNTRIES							
USSR							
37	Frag-T	OR-167	1.451	0.346	0.422	1.45	12
37	Frag-T	OR-167N	1.45	0.30	0.82	0.85	12A
37	AP-T	BR-167	1.450	0.229	1.064	3.40	13
37	HEI-T	OZT	1.452	0.30	0.902	3.516	14
37	AP-T	BZT	1.451	0.412 0.700	1.155	3.157	15
45	Frag	O-240	1.763	0.417	2.508	0.184	16
45	AP	B-240	1.767	0.385	0.921	3.890	17
45	AP-T	BR-240	1.769	0.400	0.845	3.910	18
45	API	BZ-240	1.765	0.48 0.20	0.84	3.83	19
45	HVAP-T	BR-240P	1.767	0.15	1.040	2.409	20
50	Frag	O-822Sh	1.940	0.753	—	0.445	21
50	Frag	O-822	1.945	0.698	—	0.479	22
57	Frag	O-271	2.240	0.513	3.211	1.116	23
57	Frag	O-271U	2.238	0.51	3.228	1.098	24
57	Frag	O-271U	2.24	0.52	3.20	1.09	25
57	AP-T	BR-271	2.238	0.690	1.429	4.542	26
57	AP-T	BR-271K	2.23	0.63	2.14	2.36	27
57	AP-T	BR-271SP	2.239 2.238	0.475 0.470	1.440	4.755	28
57	HVAP-T	BR-271P	2.238	0.225	1.210	2.805	29
57	Frag-T	OR-281	2.24	0.495	1.514	2.535	30

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Table V. Bourrelet (Continued)

Projectile			Diameter of bourrelet (in)	Width of bourrelet (in)	Distance rotating band to bourrelet (in)	Distance bourrelet to nose (in)	Figure No.
Caliber (mm)	Type	Identifi- cation					
EURASIAN COMMUNIST COUNTRIES (Continued)							
USSR (Continued)							
57	APC-T	BR-281	2.24	0.58	1.00	4.51	31
57	APC-T	BR-281U	2.24(4)	0.58	1.00	4.68	31a
57	Frag-T	OR-281U	2.24	0.52	1.53	2.53	32
76	HE	F-354F	2.980	0.912	6.533	1.536	33
76	HE	F-354F	2.977	0.794	6.674	1.807	34
76	HE	F-354G	2.981	—	6.505	—	35
76	Frag	O-350A	2.991 2.990	0.425 0.525	2.145	5.310	36
76	Frag-HE	OF-350	2.98	0.50	2.58	5.22	37
76	Frag-HE	OF-350A	2.98	0.55 0.52	2.50	5.14	38
76	Shrap	Sh-354G	2.985	1.109	4.253	1.490	39
76	Shrap	Sh-361	2.993	0.63 0.54	—	1.949	40
76	HEAT	BR-353A	2.98	0.84	3.82	3.78	41
76	HEAT	BR-350M	2.990	0.50	3.003	3.83	42
76	AP-T	BR-350	2.995	0.638	2.364	5.807	43
76	AP-T	BR-350A	2.995	0.530	2.632	7.157	44
76	AP-T	BR-350B	2.993	0.800	2.200	5.667	45
76	AP-T	BR-350B	2.993	0.705	2.295	5.618	46
76	API-F	BZR-350B	2.994	0.649	2.360	5.680	47
76	HVAP-T	BR-354P	2.983	0.357	1.528	3.396	48
76	HVAP-T	BR-354P	2.99	0.40	1.55	3.40	49

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Table V. Bourrelet (Continued)

Projectile			Diameter of bourrelet (in)	Width of bourrelet (in)	Distance rotating band to bourrelet (in)	Distance bourrelet to nose (in)	Figure No.
Caliber (mm)	Type	Identifi- cation					
EURASIAN COMMUNIST COUNTRIES (Continued)							
USSR (Continued)							
40/ 80	HEAT	PG-7	1.570	0.58; 0.20 0.20; 0.78	---	13.26	51
82	Frag	O-832	3.202	1.353	---	1.568	52
82	Frag	O-832D	3.216	1.292	---	1.531	53
82	Frag	O-832DU	3.20	1.30	---	1.51	54
82	Frag	O-881A	3.217	0.63	---	1.93	55
82	HEAT	BK-881	3.219	2.88	---	3.03	56
82	HEAT	BK-881M	3.219	2.88	---	3.03	57
82	HEAT	PG-82	3.234 3.220	0.25 0.18	---	3.13	57a
85	Frag	O-365	3.361	0.67	3.33	7.33	58
85	Frag	O-365	3.341	0.67	3.194	2.54	59
85	Frag	O-365K	3.341	1.123	3.232	---	60
85	AP-T	BR-365	3.340	0.75	2.188	---	61
85	AP-T	BR-365K	3.340	9.756	2.106	3.747	62
85	HVAP-T	BR-365P	3.340	0.256	2.96	4.579	63
85	HVAP-T	BR-365PK	3.335	0.260	2.96	4.596	64
100	HE	F-412	3.930	0.768	4.903	7.253	65
100	AP-T	BR-412	3.930 3.929	0.941 0.728	3.012	4.160	66
100	AP-T	BR-412B	3.93	1.00	3.53	6.96	67
100	APC-T	BR-412D	3.932	1.00	3.42	8.16	68

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Table V. Bourrelet (Continued)

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Projectile			Diameter of bourrelet (in)	Width of bourrelet (in)	Distance rotating band to bourrelet (in)	Distance bourrelet to nose (in)	Figure No.
Caliber (mm)	Type	Identification					
EURASIAN COMMUNIST COUNTRIES (Continued)							
USSR (Continued)							
100	APC-T	BR-412D	3.934	1.18	3.38	8.34	68a
100	Frag-HE	OF-412	3.94	0.87 0.90	4.80	7.20	69
100	Frag	O-415	3.93	0.95	3.69	7.19	69a
107	Frag-HE	OF-841A	4.19	2.15	—	2.61	70
107	Frag-HE	OF-841	4.19	2.15	—	2.55	71
107	Frag-HE	OF-883A	4.20	1.50	—	2.36	72
107	HEAT	BK-883	4.199	1.84	—	2.57	73
115	HEAT	BK-4	4.531 4.530	0.930 0.44	3.19	6.34	74
115	HEAT	BK-4	4.520 4.519	0.94 0.44	2.96	6.42	74a
120	HE	F-843	4.700	2.084	—	4.838	75
120	Frag-HE	OF-843	4.69	2.00	—	3.26	76
120	Frag-HE	OF-843A	4.702	1.60	—	3.50	77
122	HE	F-460	4.769	0.858	10.287	5.795	78
122	Frag	O-460A	4.795	1.08 1.12	—	8.16	79
122	Frag-HE	OF-462	4.80	1.50 0.76	6.65	6.11	80
122	Frag-HE	OF-462	4.791	0.828	6.749	7.795	81
122	Frag-HE	OF-462	4.793	0.781	6.631	8.589	82
122	Smoke	D-462	4.80	0.93 0.81	—	7.60	83

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Table V. Bourrelet (Continued)

Projectile			Diameter of bourrelet (in)	Width of bourrelet (in)	Distance rotating band to bourrelet (in)	Distance bourrelet to nose (in)	Figure No.
Caliber (mm)	Type	Identifi- cation					
EURASIAN COMMUNIST COUNTRIES (Continued)							
USSR (Continued)							
122	Frag-HE	OF-471N	4.795	0.70 1.24	6.95	10.28	84
122	Frag-HE	OF-471N	4.794 4.795	1.205 0.830	6.886	10.258	85
122	Shrap	Sh-462	4.78	1.50	7.775	6.40	86
122	Prop	A-462	4.805	0.90	6.68	10.90	87
122	HEAT	BR-460A	4.787 4.78	0.744 0.781	5.935	3.43	88
122	AP-T	BR-471	4.781	0.72 0.77	3.84	5.76	89
122	AP-T	BR-471B	4.796 4.794	0.972 0.811	2.647	9.271	90
122	Frag-HE	OF-472	4.80	1.00 0.81	4.31	12.44	91
122	APC-T	BR-472	4.80	0.77	4.72	10.28	92
122	HEAT	BR-6M	4.80	1.06 0.90	—	6.42	93
130	Frag-HE	OF-482	5.107	0.97 1.07	5.750	—	94
130	AP	?	5.107	0.97 1.07	5.50	—	95
130	Frag-HE	OF-482M	5.12	1.06 0.82	0.20	10.75	96
130	APC-T	BR-482B	5.12	0.87 0.98	4.33	9.97	97
130	Frag-HE	OF-3S-42	5.12	1.02 0.87	0.24	9.92	98

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Table V.. Bourrelet (Continued)

Projectile			Diameter of bourrelet (in)	Width of bourrelet (in)	Distance rotating band to bourrelet (in)	Distance bourrelet to nose (in)	Figure No.
Caliber (mm)	Type	Identifi- cation					
EURASIAN COMMUNIST COUNTRIES. (Continued)							
USSR (Continued)							
152	Frag-HE	OF-540	5.99	0.81 0.84	7.13	13.14	100
152	Frag-HE	OF-540	5.98	1.46 1.06	—	12.87	101
152		G-530	5.99	0.75 0.85	6.19	12.28	102
160	HE	F-852	6.29	4.69	—	7.51	103
160	HE	F-853U	6.28	3.40	—	3.93	103a
160	HE	F-853A	6.28	5.15	—	5.77	103b
203	CP	G-620	7.96 7.94	1.07 0.98	7.43	18.90	104
240	HE	?	9.47	2.00	—	22.39	104a
280	CP	G-674	10.993	1.63	10.40	28.84	105
PRC							
57	HE	?	2.231	0.19 0.20	1.72	1.38	106
57	HEAT	?	2.236	0.65	3.474	1.85	107
60	Frag	31	2.357	1.00	—	0.970	108
60	Frag	31	2.357	0.84	—	0.94	109
60	HE	?	2.375	1.40	—	14.354	110
70	HE	92	2.745	0.56	4.45	2.42	111
70	HEAT	3	2.745	0.65	4.50	2.25	112
75	HE	94	2.94	0.81	6.34	2.50	113

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Table V. Bourrelet (Continued)

Projectile.			Diameter of bourrelet (in)	Width of bourrelet (in)	Distance rotating band to bourrelet (in)	Distance bourrelet to nose (in)	Figure No.
Caliber (mm)	Type	Identifi- cation					
EURASIAN COMMUNIST COUNTRIES (Continued)							
PRC (Continued)							
75	HE	26.8	2.94	0.72 1.06	4.13	3.90	114
75	HE	26.12	2.94	1.00 0.72	4.13	4.263	115
75	HE	?	2.94	1.06 0.72	4.13	4.31	116
75	HEAT	?	2.94	3.20 0.525	3.60	3.73	117
75	HEAT	?	2.91	1.682	—	1.80	118
81	HE	?	3.20	0.912	—	3.278	120
81	Frag	?	3.174	1.26	—	1.58	121
82	HE	53	3.201	1.04	—	1.97	122
82	Frag	M30	3.198	1.189	—	1.567	123
82	HE	20	3.225	0.760	—	1.67	124
82	Frag	20	3.23	0.735	—	1.45	125
82	HE	20	3.229	0.882	—	1.688	126
82	HEAT	65	3.214	2.50	—	4.50	126a
85	APC-T	367	3.34	0.77	2.55	6.57	126b
87	HEAT	241	3.432	3.16	—	2.741	127
102	HE	102A3	4.035	1.543	—	3.84	128
105	HE	91	4.12	0.78	9.02	5.14	129
105	HE	91	4.125	0.81	5.88	7.52	130
107	HE	63	4.20	2.00	—	9.69	131



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Table V. Bourrelet (Continued)

Projectile			Diameter of bourrelet (in)	Width of bourrelet (in)	Distance rotating band to bourrelet (in)	Distance bourrelet to nose (in)	Figure No.
Caliber (mm)	Type	Identification					
EURASIAN COMMUNIST COUNTRIES (Continued)							
PRC (Continued)							
120	HE	33	4.69	1.72	—	3.06	132
120	Frag	33	4.68	1.87	—	2.34	133
120	Frag	843	4.70	1.70	—	3.37	134
122	Prop	?	4.79(2)	0.97 0.74	3.40	10.67	134
CZECHOSLOVAKIA							
37	HEI-T	OZT	1.451	0.395	0.910	0.92	135
37	AP-T	BZT	1.452 1.450	0.577 0.138	0.563	1.084	136
57	AP-T	?	2.237	0.534 0.511	1.414	4.812	137
82	Frag	IKX-51	3.21	0.66	—	1.65	138
82	HEAT	T-21	3.215	2.27	—	4.46	139
85	Frag	OF	3.35	0.59 1.18	—	5.71	140
100	HE	OF	3.932	1.09	4.67	7.13	141
100	APC-T	PSv	3.926 3.923	0.832 0.390	0.250	8.603	142
120	HE	OF-A	4.72	1.15	—	3.685	143
130	HE	RP-2	5.11	20.815	—	8.485	144
NORTH VIETNAM							
82	HE	B1	3.213 3.200	0.35 0.39	—	2.60	144a

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Table V. Bourrelet (Continued)

Projectile			Diameter of bourrelet (in)	Width of bourrelet (in)	Distance rotating band to bourrelet (in)	Distance bourrelet to nose (in)	Figure No.
Caliber (mm)	Type	Identifi- cation					
EURASIAN COMMUNIST COUNTRIES (Continued)							
NORTH KOREA							
40/45	HE	LCC-32	1.59 (sta- bilizer)	---	---	---	145a
82	Frag	O-881	3.22	0.65	---	1.87	146
82	HEAT	BK-881	3.21	2.94	---	3.0	147
POLAND							
82	HEAT	BK-881	3.219	2.88	---	3.03	149
122	Frag-HE	OF-462	4.80	0.94 0.79	---	7.64	150
YUGOSLAVIA							
76	HE	OF-350	2.994	0.554 0.856	2.188	5.254	151
82	HE	31	3.210	0.950	---	1.793	152
120	HE	49	4.701	1.81	---	3.37	153
120	HE	56	4.70	1.98	---	2.02	154
FREE-WORLD COUNTRIES							
BELGIUM							
83	HEAT	?	3.25	2.20	---	1.79	155
CANADA							
76	HVAPDS-T	M331	2.997	0.42	3.51	3.06	156

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Table V. Bourrelet (Continued)

Projectile			Diameter of bourrelet (in)	Width of bourrelet (in)	Distance rotating band to bourrelet (in)	Distance bourrelet to nose (in)	Figure No.
Caliber (mm)	Type	Identifi- cation					
FREE-WORLD COUNTRIES (Continued)							
FINLAND							
160	HE	M1955	6.30	1.80	---	8.10	157
160	HE	1/53,1953	6.28 6.29	0.675 0.640	---	32.89	158
FRANCE							
60	HE	Model 50	2.366	0.650	---	3.74	159
73	HEAT	M1950	2.87	3.00	---	---	160
90	HEAT	Model 62	3.54	0.725	---	8.071	161
100	AP-T	?	3.932	0.75	3.72	9.106	162
105	HE	?	4.128	1.00 0.90	2.60	8.00	163
105	HEP	?	4.120	0.77 0.45	6.27	9.07	164
105	HEAT	68 OCC	4.125	1.87	4.78	7.47	165
120	HE	PEPA (Type 1)	4.72	1.56	---	4.75	166
120	HE	PRPA	4.712	0.42 0.42 0.59	5.77	6.76	167
120	HE	44	4.706	1.58	---	4.62	168
120	HE	BT-1-50	4.70	3.40	---	4.14	169
155	HE	?	6.095	1.81 1.09	3.33	7.74	170
155	HE	?	6.084	1.16 1.92	9.16	9.74	171

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Table V. Bourrelet (Continued)

Projectile			Diameter of bourrelet (in)	Width of bourrelet (in)	Distance rotating band to bourrelet (in)	Distance bourrelet to nose (in)	Figure No.
Caliber (mm)	Type	Identifi- cation					
FREE-WORLD COUNTRIES (Continued)							
GERMANY							
88	HE	L/4.5	3.436	1.00 0.375	3.87	4.40	172
88	APC-T	?	3.44	0.23 0.23	2.11	—	173
88	APC-T	?	3.44	0.23 0.23	2.11	—	174
ISRAEL							
52	HE	MK 2/1	2.00	0.47	—	1.10	175
52	HE	?	2.00	0.47	—	—	175a
52	Smoke	MK 1/2	2.00	0.61	—	—	176
52	Illum	?	2.00	0.50	—	1.03	176a
81	HE	MK 8/3	3.175	1.60	—	1.655	177
81	Smoke	MK 16/3	3.175	1.438	—	1.75	178
82	HEAT.	?	3.22	0.40	—	4.571	179
82	HE	MK 5	3.23	0.60	—	3.68	179a
82	Smoke	MK 46	3.23	0.60	—	3.68	179b
88	HE	?	3.44	5.713	—	4.43	180
88	HE	?	3.44	5.03	—	4.50	180a
ITALY							
81	HE	?	3.175	1.33	—	12.00	181

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Table V. Bourrelet (Continued)

Projectile			Diameter of bourrelet (in)	Width of bourrelet (in)	Distance rotating band to bourrelet (in)	Distance bourrelet to nose (in)	Figure No.
Caliber (mm)	Type	Identifi- cation					
FREE-WORLD COUNTRIES (Continued)							
SWEDEN							
40	HE	MKT1	1.567	1.697	—	1.10	182
80	HEAT	M49	3.175	0.33	—	4.055	183
			3.17	1.43			
84	HEAT	M48	3.30	1.11	3.88	3.24	184
84	HEAT	M59	3.28	0.375	—	3.758	185
				0.70			

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Table VI. Ogive

Projectile			Surface length bourrelet to nose (in)	Surface length adaptor (in)	Diameter at base adaptor (in)	Figure No.
Caliber (mm)	Type	Identifi- cation				
EURASIAN COMMUNIST COUNTRIES						
USSR						
37	Frag-T	OR-167	1.47	---	---	12
37	Frag-T	OR-167N	1.00	---	---	12a
37	AP-T	BR-167	3.45	---	---	13
37	HEI-T	OZT	1.08	---	---	14
37	AP-T	BZT	3.40	---	---	15
45	Frag	O-240	0.21	---	---	16
45	AP	B-240	4.08	---	---	17
45	AP-T	BR-240	4.00	---	---	18
45	API	BZ-240	3.93	---	---	19
45	HVAP-T	BR-240P	2.51	---	---	20
50	Frag	O-822Sh	0.55	---	---	21
50	Frag	O-822	0.58	0.39	1.055	22
57	Frag	O-271	1.22	---	---	23
57	Frag	O-271U	1.20	---	---	24
57	Frag	O-271U	0.118	---	---	25
57	AP-T	BR-271	4.52	---	---	26
57	AP-T	BR-271K	2.51	---	---	27
57	AP-T	BR-271SP	4.95	---	---	28
57	HVAP-T	BR-271P	3.0	---	---	29
57	Frag-T	OR-281	2.60	---	---	30
57	APC-T	BR-281	4.63	---	---	31
57	APC-T	BR-281U	4.00	---	---	31a

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Table VI. Ogive (Continued)

Projectile			Surface length bourelet to nose (in)	Surface length adaptor (in)	Diameter at base of adaptor (in)	Figure No.
Caliber (mm)	Type	Identifi- cation				
EURASIAN COMMUNIST COUNTRIES (Continued)						
USSR (Continued)						
57	Frag-T	OR-281U	2.60	—	—	32
76	HE	F-354F	1.58	—	—	33
76	HE	F-354F	1.93	—	—	34
76	HE	F-354G	2.67	1.003	2.475	35
76	Frag	O-350A	5.40	—	—	36
76	Frag-HE	OF-350	2.76	2.58	2.23	37
76	Frag-HE	OF-350A	5.31	—	—	38
76	Shrap	Sh-354G	1.50	0.30	?	39
76	Shrap	Sh-361	1.24	0.375	2.52	40
76	HEAT	BP-353A	3.40	3.40	?	41
76	HEAT	BP-350M	0.50	0.55	2.36	42
76	AP-T	BR-350	6.05	—	—	43
76	AP-T	BR-350A	7.53	—	—	44
76	AP-T	BR-350B	5.93	—	—	45
76	AP-T	BR-350B	6.0	—	—	46
76	API-T	BR-350B	5.83	—	—	47
76	HVAP-T	BR-354P	3.70	—	—	48
76	HVAP-T	BR-354P	3.67	—	—	49
82	Frag	O-832	1.82	—	—	52
82	Frag	O-832D	1.75	—	—	53
82	Frag	O-832DU	1.70	—	—	54

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Table VI. Ogive (Continued)

Projectile			Surface length bourrelet to nose (in)	Surface length adaptor (in)	Diameter at base of adaptor (in)	Figure No.
Caliber (mm)	Type	Identifi- cation				
EURASIAN COMMUNIST COUNTRIES (Continued)						
USSR (Continued)						
82	Frag	O-881A	2.15	---	---	55 <sub>a</sub>
82	HEAT	BK-881	3.25	---	---	56
82	HEAT	BK-881M	3.25	---	---	57
82	HEAT	PG-82	3.50	---	---	57a
85	Frag	O-365	4.84	1.06	2.52	58
85	Frag	O-365	2.64	---	---	59
85	Frag	O-365K	6.48	---	---	60
85	AP-T	BR-365	4.60	---	---	61
85	AP-T	BR-365K	4.20	---	---	62
85	HVAP-T	BR-365	4.83	3.55	1.91	63
85	HVAP-T	BR-365PK	4.83	3.55	1.92	64
100	HE	F-412	7.47	---	---	65
100	AP-T	BR-412	4.65	---	---	66
100	AP-T	BR-412B	6.96	---	---	67
100	APC-T	BR-412D	8.36	---	---	68
100	APC-T	BR-412D	8.38	---	---	68a
100	Frag-HE	OF-412	7.30	---	---	69
100	Frag	O-415	7.31	---	---	69a
107	Frag-HE	OF-841A	2.85	0.92	2.58	70
107	Frag-HE	OF-841	2.70	1.31	2.61	71
107	Frag-HE	OF-883A	3.11	1.31 (est)	2.61 (est)	72
107	HEAT	BK-883	3.23	2.64	3.859	73

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Table VI. Ogive (Continued)

Projectile			Surface length bourellet to nose (in)	Surface length adaptor (in)	Diameter at base of adaptor (in)	Figure No.
Caliber (mm)	Type	Identifi- cation				
EURASIAN COMMUNIST COUNTRIES (Continued)						
USSR (Continued)						
115	HEAT	BK-4	5.94	6.574	4.531	74
115	HEAT	BK-4	6.53	7.04	4.495	74a
120	HE	F-843	5.05	0.92	2.519	75
120	Frag-HE	OF-843	3.38	0.90	2.53	76
120	Frag-HE	OF-843A	3.67	0.98	2.54	77
122	HE	F-460	6.05	—	—	78
122	Frag	O-460A	8.35	—	—	79
122	Frag-HE	OF-462	6.44	2.43	2.88	80
122	Frag-HE	OF-462	8.10	—	—	81
122	Frag-HE	OF-462	8.74	—	—	82
122	Smoke	D-462	7.70	—	—	83
122	Frag-HE	OF-471N	10.43	—	—	84
122	Frag-HE	OF-471N	10.37	—	—	85
122	Shrap	Sh-462	6.025	1.61	3.40	86
122	Prop	A-462	6.15	—	—	87
122	HEAT	BR-460A	3.58	2.58 (est)	4.308	88
122	AP-T	BR-471	5.86	—	—	89
122	AP-T	BR-471B	9.52	—	—	90
122	Frag-HE	OF-472	12.50	—	—	91
122	APC-T	BR-472	10.28	—	—	92
122	HEAT	BK-6M	6.50	6.50	4.80	93
130	Frag-HE	OF-482	6.397	—	—	94

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Table VI. Ogive (Continued)

Projectile			Surface length bourelet to nose (in)	Surface length adaptor (in)	Diameter at base of adaptor (in)	Figure No.
Caliber (mm)	Type	Identifi- cation				
EURASIAN COMMUNIST COUNTRIES (Continued)						
USSR (Continued)						
130	AP	7	9.397	—	—	95
130	Frag-HE	OF-482M	10.80	2.50	2.48	96
130	APC-T	BR-482B	10.40	—	—	97
130	Frag-HE	OF-3S-42	10.10	—	—	98
140	Frag-HE	M-14-OF	16.37	—	—	99
152	Frag-HE	OF-540	13.21	4.21	3.57	100
152	Frag-HE	OF-540	13.10	—	—	101
152	CP	G-530	12.91	—	—	102
160	HE	F-852	6.025	1.83	3.53	103
160	HE	F-8530	4.18	1.90	3.54	103a
160	HE	F-853A	5.96	1.77	3.53	103b
203	CP	G-620	19.37	—	—	104
240	HE	7	22.49	1.46	3.46	104a
280	CP	G-674	29.28	—	—	105
PRC						
57	HE	7	1.48	—	—	106
60	HE	31	1.07	—	—	108
60	HE	31	1.04	—	—	109
70	HE	92	2.52	0.29	7	111
70	HEAT	3	2.40	1.90	2.65	112

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Table VI. Ogive (Continued)

Projectile			Surface length bourellet to nose (in)	Surface length adaptor (in)	Diameter at base of adaptor (in)	Figure No.
Caliber (mm)	Type	Identifi- cation				
EURASIAN COMMUNIST COUNTRIES (Continued)						
PRC. (Continued)						
75	HE	94	2.60	---	---	113
75	HE	26.8	4.00	---	---	114
75	HE	26.12	4.36	---	---	115
75	HE	?	4.41	---	---	116
75	HEAT	?	3.83	3.83	2.63	117
75	HEAT	?	2.00	2.00	2.67	118
40/80	HEAT	56	6.50	---	---	119
81	HE	?	1.61	0.53	2.00	120
81	Frag	?	1.78	---	---	121
82	HE	53	2.12	---	---	122
82	Frag	M30	1.72	---	---	123
82	HE	20	1.82	---	---	124
82	Frag	20	1.65	---	---	125
82	HE	20	1.84	---	---	126
82	HEAT	65	4.75	4.75	3.031	126a
85	APC-T	367	6.72	---	---	126b
87	HEAT	241	2.84	---	---	127
102	HE	102A3	3.94	---	---	128
105	HE	91	5.29	0.41	1.66	129
105	HE	91	7.62	1.50	1.92	130
107	HE	63	8.62	---	---	131

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Table VI. Ogive (Continued)

Projectile			Surface length bourellet to nose (in)	Surface length adaptor (in)	Diameter at base of adaptor (in)	Figure No
Caliber (mm)	Type	Identifi- cation				
EURASIAN COMMUNIST COUNTRIES (Continued)						
PRC (Continued)						
120	HE	33	3.16	1.24	3.09	132
120	Frag	33	2.49	1.00	2.78	133
120	HE	843	3.44	0.76	2.60	134
122	Prop	?	10.71	---	---	134a
CZECHOSLOVAKIA						
37	HEI-T	OZT	1.02	---	---	135
37	AP-T	BZT	3.53	---	---	136
57	AP-T	?	4.91	---	---	137
82	Frag	IKX-51	1.85	---	---	138
82	HEAT	T-21	2.26	---	---	139
85	Frag	OF	5.80	---	---	140
100	HE	OF	7.23	---	---	141
100	APC-T	PSv	7.75	---	---	142
120	HE	OF-A	3.79	0.41	1.94	143
130	HE	RP-2	8.64	---	---	144
NORTH VIETNAM						
100	HEAT	B50	7.92	---	---	145
NORTH KOREA						
82	Frag	O-881	2.15	---	---	146
82	HEAT	AK-881	3.25	3.25	2.99	147

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Table VI. Ogive (Continued)

Projectile			Surface Length bourellet to nose (in)	Surface length adaptor (in)	Diameter at base of adaptor (in)	Figure No.
Caliber (mm)	Type	Identifi- cation				
EURASIAN COMMUNIST COUNTRIES (Continued)						
POLAND						
82	HEAT	BK-881	3.20	3.20	3.18(est)	149
122	Frag-HE	OF-462	7.80	—	—	150
YUGOSLAVIA						
76	HE	OF-350	5.35	—	—	151
82	HE	31	1.99	0.62	1.564	152
120	HE	49	3.52	0.88	2.68	153
120	HE	56	2.22	0.71	2.85	154
FREE-WORLD COUNTRIES						
BELGIUM						
83	HEAT	7	1.99	—	—	155
CANADA						
76	HVAPDS-T	M331	4.72	—	—	156
FINLAND						
160	HE	1955	8.25	—	—	157
160	HE	1/53, 1953	17.80	—	—	158

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Table VI. Ogive (Continued)

Projectile			Surface length bourrelet to nose (in)	Surface length adaptor (in)	Diameter at base of adaptor (in)	Figure No.
Caliber (mm)	Type	Identifi- cation				
FREE-WORLD COUNTRIES (Continued)						
FRANCE						
60	Illum	50	3.74	---	---	159
73	HEAT	195Q	3.47 (est)	---	---	160
90	HEAT	62	8.22	5.29	2.97	161
100	AP-T	?	9.31	---	---	162
105	HE	?	8.10	---	---	163
105	HEP	?	9.17	---	---	164
105	HEAT	61 OCC.	3.33	3.03	3.87	165
120	HE	PEPA (Type 1)	4.90	4.90	4.20	166
120	HE	PRPA	6.91	---	---	167
120	HE	44	4.77	0.65	1.96	168
120	HE	BT-1-50	4.29	1.94	2.97	169
155	HE	?	6.51	---	---	170
155	HE	?	9.89	---	---	171
GERMANY						
88	HE	L/4.5	4.55	---	---	172
88	APC-T	?	8.18 (est)	---	---	173
88	APC-T	?	8.18 (est)	---	---	174
ISRAEL						
52	Illum	?	1.03	---	---	176
81	HE	MK 8/3	1.86	---	---	177

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Table VI. Ogive (Continued)

Projectile			Surface length barrelet to nose (in)	Surface length adaptor (in)	Diameter at base of adaptor (in)	Figure No.
Caliber (mm)	Type	Identifi- cation				
FREE-WORLD COUNTRIES (Continued)						
ISRAEL (Continued)						
81	Smoke	MK 16/3	1.90	---	---	178
82	HEAT	?	2.59	---	---	179
82	HE	MK 5	3.81	---	---	179a
82	Smoke	MK 5	3.81	---	---	179b
88	HE	?	4.53	---	---	180
88	HE	?	5.07	0.60	2.68	180a
ITALY						
81	HE	?	12.10	0.62	1.89	181
SWEDEN						
40	HE	MKII	1.20	---	---	182
80	HEAT	M49	4.26	---	---	183
84	HEAT	M48	3.44	---	---	184
84	HEAT	M59	3.86	---	---	185

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Table VII. Nose

Projectile			Exterior diameter of fuze hole (in)	Wall thickness at bottom of thread (in)	Length of threaded portion (in)	Number of threads (per in)	Figure No.
Caliber (mm)	Type	Identification					
EURASIAN COMMUNIST COUNTRIES							
USSR							
37	Frag-T	OR-167	1.02	---	---	18	12
37	Frag-T	OR-167N	1.18	0.26	0.75	18	12a
37	HEI-T	OZT	?	---	---	---	13
45	Frag	O-240	1.40	0.16	0.67	10	16
50	Frag	O-822Sh	1.409	0.30	0.40	10	21
50	Frag	O-822	0.865	0.37	0.80	32	22
57	Frag	O-271	1.40	0.513	1.48	10	23
57	Frag	O-271U	1.40	0.495	1.608	10	24
57	Frag-T	OR-281	1.41	0.35	0.95	10	30
57	Frag-T	OR-281U	1.41	0.35	0.90	10	31
76	HE	F-354F	0.91	0.57	0.553	13	33
76	HE	F-354F	0.91	0.42	0.538	13	34
76	HE	F-354G	1.25	0.21	1.30	10	35
76	Frag	O-350A	1.40	0.22	?	10	36
76	Frag-HE	OF-350	1.40	0.31	0.89	10	37
76	Frag-HE	OF-350A	1.40	0.25	0.75	10	38
76	Shrap	Sh-354G	1.35	0.13	1.48	6	39
76	Shrap	Sh-361	2.044	0.212	1.17	9	40
76	HEAT	BP-353A	0.58	0.21	0.26	26	41
76	HEAT	BP-350M	0.58	0.24	0.341	26	42

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Table VII. Nose (Continued)

Projectile			Exterior diameter of fuze hole (in)	Wall thickness at bottom of thread (in)	Length of threaded portion (in)	Number of threads (per in)	Figure No.
Caliber (mm)	Type	Identification					
EURASIAN COMMUNIST COUNTRIES (Continued)							
USSR (Continued)							
40/80	HEAT	PG-7	0.78	0.025	0.34	26	51
82	Frag	O-832	1.321	0.34	0.576	10	52
82	Frag	O-832D	1.321	—	0.75	10	53
82	Frag	O-832DU	1.40	0.402	0.66	10	54
82	Frag	O-881A	1.562	0.40	0.625	10	55
82	HEAT	BK-881	1.562	0.20	0.625	10	56
82	HEAT	BK-881M	1.56	?	0.75	10	57
82	HEAT	PG-82	1.320	0.12 (est)	0.58	10	57a
85	Frag	O-365 (2-piece)	1.42	—	—	10	58
85	Frag	O-365	2.03	0.55	1.21	9	59
85	Frag	O-365K	1.40	0.35	0.93	10	60
100	HE	F-412	1.42	0.25	0.774	10	65
100	Frag-HE	OF-412	1.30	0.40	0.63	10	69
100	Frag	O-415	2.04	0.40 (est)	1.06	9	69a
107	Frag-HE	OF-841A	1.41	0.65	0.95	17	70
107	Frag-HE	OF-841	1.417	0.60	0.501	10	71
107	Frag-HE	OF-883A	?	0.60	0.625	10	72
107	HEAT	BK-883	1.56	0.40	0.625	10	73
115	HEAT	BK-4	1.41	0.25	0.66	10	74
115	HEAT	BK-4	1.412	0.25 (est)	1.00	10	74a
120	HE	F-843	1.41	0.36	0.553	18	75

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Table VII. Nose (Continued)

Projectile			Exterior diameter of fuze hole (in)	Wall thickness at bottom of thread (in)	Length of threaded portion (in)	Number of threads (per in)	Figure No.
Caliber (mm)	Type	Identification					
EURASIAN COMMUNIST COUNTRIES (Continued)							
USSR (Continued)							
120	Frag-HE	OF-843	1.41	0.70	1.02	16	76
120	Frag-HE	OF-843A	1.312	0.75	0.82	10	77
122	HE	F-460	1.42	0.98	1.63	10	78
122	Frag	O-460A	1.457	0.46	0.840	10	79
122	Frag-HE	OF-462	1.42	0.42	0.93	10	80
122	Frag-HE	OF-462	1.42	0.37	0.82	10	81
122	Frag-HE	OF-462	1.417	0.334	0.89	10	82
122	Smoke	D-462	1.36	0.39	0.86	6	83
122	Frag-HE	OF-471N	1.457	0.32	?	10	84
122	Frag-HE	OF-471N	1.42	0.22	0.85	10	85
122	Shrap	Sh-462	2.28	0.55	0.98	9	86
122	Prop	A-462	2.28	0.55	0.98	9	87
122	HEAT	BP-460A	1.40	0.144	?	10	88
122	Frag-HE	OF-472	1.56	0.88	1.10	10	91
122	HEAT	BK-6M	1.42	0.55	0.50	10	93
130	Frag-HE	OF-482	?	1.19	?	?	94
130	Frag-HE	OF-482M	1.40	0.59	0.83	10	96
130	Frag-HE	OF-3S-42	2.05	0.59	1.30	10	98
140	Frag-HE	M-14-OF	1.41	0.37	0.75	10	99
152	Frag-HE	OF-540	1.42	0.11	0.75	10	100

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Table VII. Nose (Continued)

Projectile			Exterior diameter of fuze hole (in)	Wall thickness at bottom of thread (in)	Length of threaded portion (in)	Number of threads (per in)	Figure
Caliber (mm)	Type	Identification					
EURASIAN COMMUNIST COUNTRIES (Continued)							
USSR (Continued)							
152	Frag-HE	OF-540	1.40	0.59	0.83	10	101
160	HE	F-853U	1.41	0.86	0.83	9 (adaptor) 10 (fuze)	103a
160	HE	F-853A	1.41	0.81	0.92	9 (adaptor) 10 (fuze)	103b
160	HE	F-852	1.41	?	1.70	10	104
240	HE	?	1.57	0.42	0.80	10	104a
PRC							
57	HE	?	1.693	0.20	0.420	10	106
57	HEAT	?	1.693	0.20	0.420	10	106
57	HEAT	?	2.013	0.17	0.450	16	107
60	Frag	31	1.417	0.398	0.467	10	108
60	Frag	31	1.417	0.34	0.40	10	109
60	HE	?	1.111	0.16	0.20	12	110
70	HE	92	0.905	0.38	0.515	13	111
70	HEAT	3	0.94	0.40	0.52	13	112
75	HE	94	1.40	0.50	0.98	14	113
75	HE	26.8	1.41	0.20	0.50	10	114
75	HE	26.12	1.41	0.35	0.55	10	115
75	HE	?	1.40	0.25	0.66	10	116
75	HEAT	?	1.42	0.188	0.59	10	117
75	HEAT	?	1.32	0.18	0.46	7	118
81	HE	?	1.417	0.45	0.467	10	120

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Table VII. Nose (Continued)

Projectile			Exterior diameter of fuze hole (in)	Wall thickness at bottom of thread (in)	Length of threaded portion (in)	Number of threads (per in)	Figure No.
Caliber (mm)	Type	Identification					
EURASIAN COMMUNIST COUNTRIES (Continued)							
PRC (Continued)							
81	Frag	?	1.40	0.40	0.50	10	121
82	HE	53	1.417	0.50	0.625	10	122
82	Frag	M30	1.429	0.519	0.50	10	123
82	HE	20	1.075	0.68	0.76	13	124
82	Frag	20	0.63	0.81	0.344	17	125
82	HE	20	1.104	0.594	1.00	12	126
82	HEAT	65	—	0.28	0.36	17	126a
82	HEAT	241	0.935	0.14	0.500	13	127
102	HE	102A3	1.423	0.50	0.467	10	128
105	HE	91	0.943	0.74	0.75	12	129
105	HE	91	0.92	0.42	0.58	13	130
107	HE	63	0.141	0.27	0.80	10	131
120	HE	33	2.30	0.50	0.75	12	132
120	HE	33	1.018	1.19	0.50	12	133
120	HE	843	1.58	0.69	0.81	18	134
122	Prop	?	2.31	0.26	1.13	9	134a
CZECHOSLOVAKIA							
37	HEI-T	OZT	1.04	0.20	0.625	17	135
82	HE	IKX-51	1.32	0.72	0.575	10	138

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Table VII. Nose (Continued)

Projectile			Exterior diameter of fuze hole (in)	Wall thickness at bottom of thread (in)	Length of threaded portion (in)	Number of threads (per in)	Figure No.
Caliber (mm)	Type	Identification					
EURASIAN COMMUNIST COUNTRIES (Continued)							
CZECHOSLOVAKIA (Continued)							
82	HEAT	T-21	1.06	0.16	0.265	26	139
85	Frag	OF	1.02	0.47	0.56	10	140
100	HE	OF	1.417	0.42	1.00	10	141
100	APC-T	PSv	?	Base-BD	Steel	1.350	142
120	HE	OF-A	1.40	0.65	0.55	10	143
130	HE	RP-2	1.387	0.24	0.55	10	144
NORTH KOREA							
40/45	HE	LCC-32	1.409	0.237	0.75(est)	10	145a
82	Frag	O-881	1.40	0.335	0.74	10	146
82	HEAT	BK-881	1.56	0.10	0.63	10	147
POLAND							
82	HEAT	BK-881	1.41	?	0.75	10	149
122	Frag-HE	OF-462	1.40	0.53	0.83	10	150
YUGOSLAVIA							
76	HE	OF-350	1.32	0.333	0.84	10	151
82	HE	M31	0.914	0.514	0.50	13	152
120	HE	49	2.68	?	0.96	13	153
120	HE	56	2.85	?	0.46	13	154

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Table VII. Nose (Continued)

Projectile			Exterior diameter of fuze hole (in)	Wall thickness at bottom of thread (in)	Length of threaded portion (in)	Number of threads (per in)	Figure No.
Caliber (mm)	Type	Identification					
FREE-WORLD COUNTRIES							
BELGIUM							
83	HEAT	?	0.57	0.05	0.25	40	155
FINLAND							
160	HE	M1955	0.875	0.69	1.15	13	157
160	HE	1/53, 1953	1.49	0.318	0.993	16	158
FRANCE							
60	Illum	M50	2.72	0.06	0.45	20	159
90	HEAT	M62	0.94	?	0.30	17	161
105	HE	?	1.472	0.40	1.83	9	163
105	HEAT	61 OCC	1.10	0.125	0.68	16	165
120	HE	PEPA (Type I)	1.96	0.30	?	13	166
120	HE	PRPA	1.96	0.60	?	12	16
120	HE	44	0.92	0.45	0.50	13	168
120	HE	?	0.92	0.779	0.50	13	169
155	HE	BT-1-50	2.35	0.27	0.70	9	170
155	HE	?	2.35	0.50	1.60	9	171

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Table VII. Nose (Continued)

Projectile			Exterior diameter of fuze hole (in)	Wall thickness at bottom of thread (in)	Length of threaded portion (in)	Number of threads (per in)	Figure No.
Caliber (mm)	Type	Identification					
FREE-WORLD COUNTRIES (Continued)							
GERMANY							
88	HE	L/4.5	2.00	0.602	0.705	9	172
ISRAEL							
52	HE	?	1.755	0.12	0.52	20	175
52	HE	?	1.76	0.12	0.50	20	175a
81	HE	?	1.64	0.40	0.495	20	177
81	Smoke	?	1.64	0.40	0.495	20	178
82	HEAT	?	0.725	0.065	0.60	8	179
82	HE	?	1.25 (adaptor)	0.26	0.50 (adaptor)	13 (fuze) 16 (adaptor)	179a
82	Smoke	?	1.25 (adaptor)	0.26	0.50 (adaptor)	13 (fuze) 16 (adaptor)	179b
88	HE	?	1.985	0.50	1.575	12	180
88	HE	?	2.00	0.40	1.40	12	180a
ITALY							
81	HE	?	0.92	0.42	0.58	13	181
SWEDEN							
40	HE	MKII	1.30	0.20	0.65	14	182
80	HEAT	M49	0.825	0.035	0.36	15	183
84	HEAT	M48	0.669	0.05	0.23	12	184
84	HEAT	M59	0.67	0.125	0.63	20	185

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Table VIII. Fuze

Projectile			Model	Location and type	Material	Major diameter (in)	Figure No.
Caliber (mm)	Type	Identification					
EURASIAN COMMUNIST COUNTRIES							
USSR							
37	Frag-T	OR-167	MG-8	Nose-PDSD	Steel	1.17	12
37	Frag-T	OR-167N	B-37	Nose-PDSD	Steel	1.29	12a
37	HEI-T	OZT	A-37U	Nose-PDSD	Steel	1.171	14
45	Frag	O-240	KTM-1	Nose-PD	Steel	1.56	16
45	AP	B-240	MD-2	Base-BD	Steel	1.14	17
45	AP-T	BR-240	MD-5	Base-BD	Steel	1.14	18
45	API	BZ-240	MD-5	Base-BD	Steel	1.14	19
50	Frag	O-822Sh	M-1	Nose-PD	Steel	1.565	21
50	Frag	O-822	M-50	Nose-PD	Steel	1.20	22
57	Frag	O-271	KTM-1	Nose-PD	Steel	1.56	23
57	Frag	O-271U	KTM-1	Nose-PD	Steel	1.56	24
57	Frag	O-271U	KTM-1-U	Nose-PD	Steel	1.56	25
57	AP-T	BR-271	MD-5	Base-BD	Steel	1.14	26
57	AP-T	BR-271K	MD-7	Base-BD	Steel	1.14	27
57	Frag	OR-281	MG-57	Nose-PDSD	Steel	1.57	30
57	APC-T	BR-281	MD-10	Base-BD	Steel	1.29	31
57	APC-T	BR-281U	MD-10	Base-BD	Steel	1.29	31a
57	Frag-T	OR-281U	MGZ-57	Nose-PDSD	Steel	1.57	32
76	HE	F-354F	AD	Nose-PD	Brass	1.24	33
76	HE	F-354F	AD-2	Nose-PD	Brass	1.24	34
76	HE	F-354G	3GT	Nose-PD	Steel	1.61	35

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Table VIII. Fuze (Continued)

Projectile			Model	Location and type	Material	Major diameter (in)	Figure No.
Caliber (mm)	Type	Identification					
EURASIAN COMMUNIST COUNTRIES (Continued)							
USSR (Continued)							
76	Frag	O-350A	KTM-1	Nose-PD	Steel	1.56	36
76	Frag-HE	OF-350	KTM-1	Nose-PD	Steel	1.56	37
76	Frag-HE	OF-350A	KT-1	Nose-PD	Steel	1.60	38
76	Shrap	Sh-345G	22 PG	Nose-TSQ	Aluminum	2.52	39
76	Shrap	Sh-361	T-3	Nose-Time	Aluminum	2.52	40
76	HEAT	BR-353A	BM	Nose-PIBD	Brass	0.70	41
76	HEAT	BR-350M	BM	Nose-PIBD	Brass	0.70	42
76	AP-T	BR-350	MD-5	Base-BD	Steel	1.14	43
76	AP-T	BR-350A	MD-5	Base-BD	Steel	1.14	44
76	AP-T	BR-350B	MD-6	Base-BD	Steel	1.29	45
76	AP-T	BR-350B	MD-7	Base-BD	Steel	1.14	46
76	API-T	BZR-350B	MD-5	Base-BD	Steel	1.14	47
40/80	HEAT	PG-2	DK-2	Base-BD	Steel	1.13	50
40/80	HEAT	PG-7	VP-7	Nose-PIBD	Aluminum	0.905	51
82	Frag	O-832	M-1	Nose-PD	Steel	1.57	52
82	Frag	O-832D	M-5	Nose-PD	Plastic	1.578	53
82	Frag	O-832DU	M-6	Nose-PD	Plastic	1.55	54
82	Frag	O-881A	GK-2	Nose-PD	Aluminum	1.56	55
82	HEAT	BK-881	GK-2	Nose-PIBD	Aluminum	1.56	56

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Table VIII. Fuze (Continued)

Projectile			Model	Location and type	Material	Major diameter (in)	Figure No.
Caliber (mm)	Type	Identification					
EURASIAN COMMUNIST COUNTRIES (Continued)							
USSR (Continued)							
82	HEAT	BK-881M	GK-2M	Nose-PIBD	Aluminum	1.56	57
82	HEAT	PG-82	GK-1	Nose-PIBD	Aluminum	1.57	57a
85	Frag	O-365	KTMZ-1	Nose-PD	Steel	1.53	58
85	Frag	O-365	T-5	Nose-Time	Aluminum	2.50	59
85	Frag	O-365K	KTM-1	Nose-PD	Steel	1.56	60
85	AP-T	BR-365	MD-5	Base-BD	Steel	1.29	61
85	AP-T	BR-365K	MD-8	Base-BD	Steel	1.29	62
100	HE	F-412	RGM	Nose-PD	Brass	1.57	63
100	AP-T	BR-412	MD-8	Base-BD	Steel	1.29	66
100	AP-T	BR-412B	MD-8	Base-BD	Steel	1.29	67
100	APC-T	BR-412D	DBR-2	Base-BD	Steel	1.297	68
100	APC-T	BR-412D	DBR-2	Base-BD	Steel	1.297	68a
100	Frag-HE	OF-412	V-429	Nose-PD	Steel	1.57	69
100	Frag	O-415	VM-30L	Nose-Time	Aluminum	2.51	69a
107	Frag-HE	OF-841A	GVMZ-7	Nose-PD	Steel	1.57	70
107	Frag-HE	OF-841	GVMZ-7	Nose-PD	Steel	1.57	71
107	Frag-HE	OF-883A	GK-2	Nose-PD	Aluminum	1.56	72
107	HEAT	BK-883	GK-2	Nose-PIBD	Aluminum	1.56	73
115	HEAT	BK-4	GPV-2	Nose-PIBD	Aluminum	1.90	74
115	HEAT	BK-4	GPV-1	Nose-PIBD	Aluminum	1.575	74a
120	HE	F-843	GVMZ	Nose-PD	Steel	1.57	75
120	Frag-HE	OF-843	GVMZ	Nose-PD	Steel	1.57	76
120	Frag-HE	OF-843A	GVMZ-1	Nose-PD	Steel	1.57	77

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Table VIII. Fuze (Continued)

Projectile			Model	Location and type	Material	Major diameter (in)	Figure No.
Caliber (mm)	Type	Identification					
EURASIAN COMMUNIST COUNTRIES (Continued)							
USSR (Continued)							
122	HE	F-460	RGM	Nose-PD	Steel	1.57	78
122	Frag	Q-460A	RGM	Nose-PD	Steel	1.57	79
122	Frag-HE	OF-462	RGM	Nose-PD	Steel	1.56	80
122	Frag-HE	OF-462	D-1	Nose-TSQ	Brass	1.57	81
122	Frag-HE	OF-462	RGM	Nose-PD	Steel	1.56	82
122	Smoke	D-462	T-7	Nose-Time	Aluminum/Brass	2.52	83
122	Frag-HE	OF-471N	RGM-2	Nose-PD	Steel	1.56	84
122	Frag-HE	OF-471N	RGM	Nose-PD	Steel	1.57	85
122	Shrap	Sh-462	T-6	Nose-TSQ	Aluminum	1.37	86
122	Prop	A-462	T-6	Nose-TSQ	Aluminum	1.37	87
122	HEAT	BP-460A	V-229	Nose-PIBD	Plastic	1.58	88
122	AP-T	BR-471	MD-8	Base-BD	Steel	1.29	89
122	AP-T	BR-471B	MD-8	Base-BD	Steel	1.29	90
122	Frag-HE	OF-472	V-429	Nose-PD	Steel	1.57	91
122	APC-T	BR-472	DBR	Base-BD	Steel	1.30	92
122	HEAT	BK-6M	GPV-2	Nose-PIBD	Aluminum	1.57	93
130	Frag-HE	T	T	Nose-PD	Steel	3.56	94
130	AP	T	MR-2	Base-BD	Steel	1.438	95
130	Frag-HE	OF-482M	RGM-2	Nose-PD	Steel	1.57	96

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Table VIII. Fuse (Continued)

Projectile			Model	Location and type	Material	Major diameter (in)	Figure No.
Caliber (mm)	Type	Identification					
EURASIAN COMMUNIST COUNTRIES (Continued)							
USSR (Continued)							
130	APC-T	BR-482B	DBR	Base-BD	Steel	1.30	97
130	Frag-HE	OF-38-42	VGU-1	Nose-PD	Steel	2.48	98
140	Frag-HE	M-14-OF	V-25	Nose-PD	Steel	1.57	99
152	Frag-HE	OF-540	RGM	Nose-PD	Steel	1.57	100
152	Frag-HE	OF-540	RGM-2	Nose-PD	Steel	1.56	101
152	CP	G-530	KTD	Base-BD	Steel	2.56	102
160	HE	F-852	GVMZ-7	Nose-PD	Steel	1.57	103
160	HE	F-853U	GVMZ-7	Nose-PD	Steel	1.57	103a
160	HE	F-853A	GVMZ-7	Nose-PD	Steel	1.57	103b
203	CP	G-620	KTD	Base-BD	Steel	2.56	104
240	HE	1	V-24	Nose-PD	Steel	1.57	104a
280	CP	G-674	KTD	Base-BD	Steel	2.56	105
PRC							
57	HE	1	1	Nose-PD	Aluminum	1.90	106
57	HEAT	1	1	Nose-PD	Aluminum	2.236	107
60	Frag	31	100-3	Nose-PD	Aluminum	1.57	108
60	Frag	31	100-3	Nose-PD	Aluminum	1.57	109
60	HE	1	3711	Nose-PD	Steel	1.18	110
70	HE	92	88	Nose-PD	Brass	1.22	111
70	HEAT	3	88	Nose-PD	Brass	1.245	112
75	HE	94	88	Nose-PD	Brass	1.245	113

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Table VIII. Fuze (Continued)

Projectile			Model	Location and type	Material	Major diameter (in)	Figure No.
Caliber (mm)	Type	Identification					
EURASIAN COMMUNIST COUNTRIES (Continued)							
PRC (Continued)							
75	HE	26.8	53	Nose-PD	Steel	1.575	114
75	HE	26.12	53	Nose-PD	Steel	1.575	115
75	HE	7	M-6	Nose-PD	Plastic	1.55	116
75	HEAT	7	7	Nose-PIED	Aluminum	1.60	117
75	HEAT	7	TS-2	Nose-PIED	Aluminum	1.57	118
40/80	HEAT	56	2	Base-ED	Steel	1.13	119
81	HE	7	7	Nose-PD	Brass	1.575	120
81	Frag	7	7	Nose-PD	Brass	1.57	121
82	HE	53	7	Nose-PD	Brass	1.62	122
82	Frag	M30	6	Nose-PD	Plastic	1.55	123
82	HE	20	9	Nose-PD	Brass	1.28	124
82	Frag	20	82	Nose-PD	Brass	1.265	125
82	HE	20	9	Nose-PD	Brass	1.28	126
82	HEAT	65	4	Base-ED	Plastic	1.125	126a
85	APC-T	367	2	Base-ED	Steel	1.56	126b
87	HEAT	241	137	Nose-PIED	Brass	1.25	127
102	HE	102A3	7	Nose-PD	Brass	1.59	128
105	HE	9F	88	Nose-PD	Brass	1.26	129
105	HE	91	88	Nose-PD	Brass	1.245	130
107	HE	63	1	Nose-PD	Steel	1.57	131
120	HE	33	1	Nose-PD	Steel	1.57	132

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Table VIII. Fuze (Continued)

Projectile			Model	Location and type	Material	Major diameter (in)	Figure No.
Caliber (mm)	Type	Identification					
EURASIAN COMMUNIST COUNTRIES					(Continued)		
PRC (Continued)							
120	Frag	33	9	Nose-PD	Brass	1.25	133
120	HE	843	?	Nose-PD	Brass	1.25	134
122	Prop	?	?	Nose-Time	Aluminum (est)	1.37 (est)	134a
CZECHOSLOVAKIA							
37	HEI-T	OZT	A-37	Nose-PDSD	Steel	1.152	135
57	AP-T	?	MD-10	Base-BD	Steel	1.06	137
82	Frag	?	IKX-51	Nose-PD	?	?	138
82	HEAT	T-21	Z-21	Nose-PD	Steel	1.17	139
85	Frag	OF	KTM-1	Nose-PD	Steel	1.54	140
100	HE	OF	NZ 10 AV	Nose-PD	Steel	1.56	141
100	APC-T	PSy	?	Base-BD	Steel	1.35	142
120	HE	OF-A	MZ 30 AV	Nose-PD	Steel	1.57	143
130	H3	BP-Z	NZ 60 V	Nose-PD	Steel	1.49	144
NORTH VIETNAM							
82	HE	B1	II	Base-Time	Steel	1.748	144a
100	HEAT	B-50	?	Base-BD	Steel	1.64	145
NORTH KOREA							
40/45	HE	LCC-32	M1	Nose-PD	Steel	1.57	145a
82	Frag	O-881	GK-2	Nose-PD	Aluminum	1.56	146
82	HEAT	BK-881	GK-2	Nose-PD	Aluminum	1.56	147

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Table VIII. Fuze (Continued)

Projectile			Model	Location and type	Material	Major diameter (in)	Figure No.
Caliber (mm)	Type	Identification					
EURASIAN COMMUNIST COUNTRIES (Continued)							
POLAND							
40/80	HEAT	DK-2	DK	Base-BD	Steel	1.13	148
82	HEAT	BK-881	GK-2	Nose-PIBD	Aluminum	1.56	149
122	Frag-HE	OF-462	RGM-2	Nose-PD	Steel	1.57	150
YUGOSLAVIA							
76	HE	OF-350	KTM-1	Nose-PD	Brass	1.56	151
82	HE	31	UTM45 P1	Nose-PD	Steel	1.175	152
120	HE	49	B-45TU	Nose-PD	Brass	1.23	153
120	HE	56	UTU-M45	Nose-PD	Brass	1.23	154
FREE-WORLD COUNTRIES							
BELGIUM							
83	HEAT	?	?	Nose-PIBD	Aluminum	1.50	155
FINLAND							
160	HE	1955	SP-52	Nose-PD	Brass	1.179	157
160	HE	1/53, 1953	?	Nose-PD	Steel	1.96	158

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Table VIII. Fuze (Continued)

Projectile			Model	Location and type	Material	Major diameter (in)	Figure No.
Caliber (mm)	Type	Identification					
FREE-WORLD COUNTRIES (Continued)							
FRANCE							
60	Illum	50	?	Nose-Time	Aluminum & Brass	2.332	159
73	HEAT	1950	?	Base-BD	Aluminum	1.125	160
90	HEAT	62	?	Nose-PIBD	Aluminum	1.256	161
105	HE	?	?	Nose-PD	?	2.78	163
105	HEP	?	?	Base-BD	Steel	2.94	164
105	HEAT	61 OCC	?	Nose-PIBD	Steel	2.055	165
120	HE	PEPA (Type 1)	V-19	Nose-PD	Steel	1.96	166
120	HE	PRPA	MSIAS	Nose-PD	Steel	2.45	167
120	HE	44	V18-1	Nose-PD	Brass	1.30	168
120	HE	BT-1-50	V18-1	Nose-PD	Brass	1.30	169
155	HE	?	?	Nose-PD	?	4.855	170
155	HE	?	?	Nose-PD	?	2.93	171
GERMANY							
88	HE	L/4.5	3/30	Nose-MT	Aluminum	2.385	172
88	APC-T	?	?	Base-BD	Steel	1.175	173
88	APGT	?	Bd Z	Base-BD	Steel	2.15	174

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Table VIII. Fuze (Continued)

Projectile			Model	Location and type	Material	Major diameter (in)	Figure No.
Caliber (mm)	Type	Identification					
FREE-WORLD COUNTRIES (Continued)							
ISRAEL							
52	HE	MK 2/1	?	Nose-PD	Aluminum	2.00	175
52	HE	?	?	Nose-PD	Aluminum	2.00	175a
81	HE	MK 8/3	?	Nose-PD	?	2.00	177
81	Smoke	MK 16/3	?	Nose-PD	?	2.00	178
82	HEAT	?	MK-1	Nose-PIBD	?	0.84	179
82	HE	MK 5	V181.R.	Nose-PD	Brass	1.24	179a
82	Smoke	MK 5	V181.R.	Nose-PD	Brass	1.24	179b
88	HE	?	M51A5	Nose-PD	Steel	2.40	180
88	HE	?	M51A5	Nose-PD	Steel	2.40	180a
ITALY							
81	HE	?	81-I-R	Nose-PD	Aluminum	1.24	181
SWEDEN							
40	HE	MKII	MKI	Nose-PD	?	1.30	182
80	HEAT	M49	M49	Nose-PIBD	?	0.895	183
84	HEAT	M48	?	Nose-PIBD	?	0.775	185

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Table IX. Projectile Length

Projectile			Base to band upper edge (in)	Rotating band to top of bourrelet (in)	Bourrelet to nose (excluding adapter) (in)	Total unfuzed length (in)	Total fuzed length (in)	Figure No.
Caliber (mm)	Type	Identification						
EURASIAN COMMUNIST COUNTRIES								
USSR								
37	Frag-T	OR-167	1.74	0.768	1.45	4.31	6.81	12
37	Frag-T	OR-167N	2.15	0.42	0.85	4.35	6.85	12a
37	AP-T	BR-167	1.505	1.293	3.400	6.545	----	13
37	HEI-T	OZT	1.509	1.202	1.034	4.583	7.065	14
37	AP-T	BZT	1.014	1.155	3.157	6.556	?	15
45	Frag	O-240	5.057	2.925	0.184	8.166	9.820	16
45	AP	B-240	1.581	1.306	3.890	6.777	7.255	17
45	AP-T	BR-240	1.730	1.245	3.785	6.760	8.05	18
45	AP	BZ-240	2.17	1.32	1.88	6.73	7.32	19
45	HVAP-T	BR-240P	1.088	1.190	2.409	5.07	?	20
50	Frag	O-822Sh	---	---	0.445	6.662	8.487	21
50	Frag	O-822	---	---	0.479	6.964	8.112	22
57	Frag	O-271	4.718	3.724	1.116	9.558	11.212	23
57	Frag	O-271U	4.718	3.798	1.098	9.554	11.208	24
57	Frag	O-271U	4.71	3.72	1.09	9.52	11.19	25
57	AP-T	BR-271	2.281	2.119	4.542	9.024	10.100	26
57	AP-T	BR-271K	2.77	2.77	2.36	7.53	8.79	27

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Table IX. Projectile Length (Continued)

Projectile			Base to band upper edge (in)	Rotating band to top of Bourrelet (in)	Bourrelet to nose (excluding adapter) (in)	Total unfuzed length (in)	Total fuzed length (in)	Figure No.
Caliber (mm)	Type	Identifi- cation						
EURASIAN COMMUNIST COUNTRIES (Continued)								
USSR (Continued)								
57	AP-T	BR-271SP	2.378	1.910	4.755	9.043	9.543	28
57	HVAP-T	BR-271P	1.720	1.435	2.805	6.31	?	29
57	Frag-T	OR-281	2.311	2.009	2.535	8.295	10.205	30
57	APC-T	BR-281	1.91	1.58	4.51	8.00	9.10	31
57	APC-T	BR-281U	1.92	1.58	4.68	8.18	9.28	31a
57	Frag-T	OR-281U	2.40	2.06	4.37	8.45	10.29	32
76	HE	F-354F	2.034	7.445	1.536	11.015	12.489	33
76	HE	F-354F	2.033	7.468	1.807	11.308	12.803	34
76	HE	F-354G	1.958	---	---	11.463	12.293	35
76	Frag	OF-350A	3.90	2.670	5.310	11.88	13.95	36
76	Frag-HE	OF-350	3.89	3.08	5.22	12.19	14.26	37
76	Frag-HE	OF-350A	3.91	3.05	5.14	12.10	14.01	38
76	Shrap	Sh-354G	2.002	5.362	1.197	8.864	10.733	39
76	Shrap	Sh-361	3.60	0.54	1.19	9.015	14.655	40
76	HEAT	BP-353A	2.93	4.66	3.78	12.21	12.87	41
76	HEAT	BP-350M	3.859	3.503	3.83	12.125	12.785	42
76	AP-T	BR-350	2.181	3.002	5.807	10.975	12.018	43
76	AP-T	BR-350A	2.20	3.162	7.157	12.502	13.545	44
76	AP-T	BR-350B	2.175	3.00	5.667	10.842	11.842	45

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Table IX. Projectile Length (Continued)

Projectile			Base to band upper edge (in)	Rotating band to top of bourrelet (in)	Bourrelet to nose (excluding adapter) (in)	Total unfuzed length (in)	Total fuzed length (in)	Figure No.
Caliber (mm)	Type	Identifi- cation						
EURASIAN COMMUNIST COUNTRIES (Continued)								
USSR (Continued)								
76	AP-T	BR-350B	2.197	3.00	5.618	10.815	11.825	46
76	API-T	BZR-350B	2.194	3.009	5.680	10.883	11.959	47
76	HVAP-T	BR-354P	1.435	1.885	3.396	6.716	?	48
76	HVAP-T	BR-354P	1.40	1.95	3.60	6.75	?	49
40/80	HEAT	PG-2	---	---	---	19.77	19.77	50
40/80	HEAT	PG-7	---	---	13.26	23.665	25.45	51
82	Frag	O-832	---	---	1.568	10.850	12.693	52
82	Frag	O-832D	---	---	1.531	10.88	12.25	53
82	Frag	O-832DU	---	---	1.50	12.45	12.95	54
82	Frag	O-881A	---	---	1.93	21.01	23.95	55
82	HEAT	BK-881	---	---	3.03	23.97	26.91	56
82	HEAT	BK-881	---	---	3.03	23.97	26.91	56
82	HEAT	BK-881M	---	---	3.03	23.969	27.787	57
85	Frag	O-365	3.82	4.00	5.65	13.47	15.15	58
85	Frag	O.365	4.914	3.86	2.54	11.32	16.352	59
85	Frag	O.365K	3.912	?	?	13.558	15.243	60
85	AP-T	BR-365	3.894	?	?	10.477	11.467	61
85	AP-T	BR-365K	3.894	2.862	3.747	10.503	11.918	62
85	HVAP-T	BR-365P	2.302	3.22	4.579	10.097	?	63
85	HVAP-T	BR-365PK	2.38	3.22	4.596	10.196	?	64

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Table IX. Projectile Length (Continued)

Projectile			Base to band upper edge (in)	Rotating band to top of bourellet (in)	Bourellet to nose (excluding adapter) (in)	Total unfuzed length (in)	Total fuzed length (in)	Figure No
Caliber (mm)	Type	Identifi- cation						
EURASIAN COMMUNIST COUNTRIES (Continued)								
USSR (Continued)								
100	HE	F-412	3.982	5.671	7.253	16.906	19.136	65
100	AP-T	BR-412	4.732	3.953	4.160	12.845	14.245	66
100	AP-T	BR-412B	4.00	3.53	6.96	14.48	15.89	67
100	APC-T	BR-412D	2.61	4.42	9.16	15.19	17.32	68
100	APC-T	BR-412D	2.60	4.56	8.34	15.50	17.63	68a
100	Frag-HE	OF-412	4.02	5.67	7.20	18.69	19.25	69
100	Frag	O-415	3.99	4.64	7.31	15.82	20.13	69a
107	Frag-HE	OF-841A	---	---	2.61	19.57	21.63	70
107	Frag-HE	OF-841	---	---	2.55	19.71	21.63	71
107	Frag-HE	OF-883A	---	---	2.06	17.49	20.43	72
107	HEAT	BK-883	---	---	0.59	21.62	24.56	73
115	HEAT	BK-4	5.20	4.12	6.34	23.03	24.87	74
115	HEAT	BK-4	5.09	3.90	5.42	22.85	24.86	74a
120	HE	F-843	---	---	4.838	26.722	20.505	75
120	Frag-HE	OF-843	---	---	3.26	22.94	25.83	76
120	Frag-HE	OF-843A	---	---	3.50	24.205	26.34	77
122	HE	F-460	1.526	11.145	5.795	18.466	20.738	78
122	Frag	O-460A	4.37	1.12	8.16	17.67	19.90	79
122	Frag-HE	OF-462	4.32	8.15	6.11	18.58	20.89	80
122	Frag-HE	OF-462	4.388	7.577	7.795	19.760	22.143	81
122	Frag-HE	OF-462	3.739	0.781	8.589	19.74	22.0	82

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Table IX. Projectile Length (Continued)

Projectile			Base to band upper edge (in)	Rotating band to top of bourrelet (in)	Bourrelet to nose (excluding adapter) (in)	Total unfuzed length (in)	Total fuzed length (in)	Figure No.
Caliber (mm)	Type	Identifi- cation						
EURASIAN COMMUNIST COUNTRIES (Continued)								
USSR (Continued)								
122	Smoke	D-462	4.41	7.61	7.60	19.62	24.77	83
122	Frag-HE	OF-471N	11.23	7.65	10.28	21.51	23.88	84
122	Frag-HE	OF-471N	3.588	7.716	10.258	21.562	23.792	85
122	Shrap	Sh-462	1.550	7.775	2.40	13.69	18.74	86
122	Prop	A-462	2.36	7.58	6.00	15.94	20.84	87
122	HEAT	BP-460A	3.081	6.679	3.43	13.19	14.51	88
122	AP-T	BR-471	3.61	0.77	5.76	13.93	15.37	89
122	AP-T	BR-471B	3.598	3.839	9.271	16.508	17.910	90
122	Frag-HE	OF-472	4.51	5.31	12.44	22.36	24.56	91
122	APC-T	BR-472	11.28	5.49	11.18	17.72	19.65	92
122	HEAT	BK-6M	0.79	12.32	6.42	25.55	27.83	93
130	Frag-HE	?	3.87	1.94	?	?	24.5	94
130	AP	?	3.85	6.47	?	?	?	95
130	Frag-HE	OF-482M	3.51	7.59	10.75	24.01	26.38	96
130	APC-T	BR-482B	3.54	5.20	9.97	18.71	19.53	97
130	Frag-HE	OF-3S-42	3.71	6.11	9.92	19.74	24.39	98
140	Frag-HE	M-14-OF	---	---	---	41.05	43.65	99
152	Frag-HE	OF-540	4.48	7.94	13.14	25.56	27.80	100
152	Frag-HE	OF-540	4.53	8.19	12.87	25.59	27.96	101

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Table IX. Projectile Length (Continued)

Projectile			Base to band upper edge (in)	Rotating band to top of bourrelet (in)	Bourrelet to nose (excluding adapter) (in)	Total unfuzed length (in)	Total fuzed length (in)	Figure No.
Caliber (mm)	Type	Identification						
EURASIAN COMMUNIST COUNTRIES (Continued)								
USSR (Continued)								
152	CP	G-530	4.52	6.94	12.28	23.74	23.74	102
160	HE	F-852	---	---	6.025	36.20	38.64	103
160	HE	F-853U	---	---	3.93	41.53	44.08	103a
160	HE	F-853A	---	---	3.77	41.51	44.06	103b
203	CP	G-620	7.40	8.50	18.90	34.80	34.80	104
240	HE	?	---	---	---	44.43	48.16	104a
280	CP	G-674	9.93	12.03	28.84	50.80	50.80	105
PRC								
57	HE	?	1.379	1.91	1.38	4.669	6.514	106
57	HEAT	?	1.372	4.124	1.85	4.346	7.346	107
60	FRAG	31	---	---	0.97	7.55	8.93	108
60	FRAG	31	---	---	0.94	7.50	8.90	109
60	HE	?	---	---	14.354	32.94	34.60	110
70	HE	92	3.50	5.01	2.42	8.93	11.39	111
70	HEAT	3	1.45	5.15	0.55	8.85	11.13	112
75	HE	94	1.98	7.15	2.50	11.938	14.238	113
75	HE	26.8	2.61	5.19	3.91	11.69	13.39	114
75	HE	26.12	2.61	5.19	4.263	12.043	13.79	115
75	HE	?	2.60	5.19	4.31	12.10	14.13	116
75	HEAT	?	2.62	0.525	3.73	13.15	14.33	117
75	HEAT	?	---	---	1.80	13.183	16.118	118
40/80	HEAT	56	---	---	---	19.48	19.48	119

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Original

Table IX. Projectile Length (Continued)

Projectile			Base to band upper edge (in)	Rotating band to top of bourrelet (in)	Bourrelet to nose (excluding adaptor) (in)	Total unfuzed length (in)	Total fuzed length (in)	Figure No.
Caliber (mm)	Type	Identification						
EURASIAN COMMUNIST COUNTRIES (Continued)								
PRC (Continued)								
81	HE	?	---	---	1.468	11.42	12.80	120
81	Frag	?	---	---	1.58	10.92	12.21	121
82	HE	53	---	---	1.97	11.23	12.76	122
82	Frag	M30	---	---	1.633	11.004	12.994	123
82	HE	20	---	---	1.67	11.53	12.30	124
82	Frag	20	---	---	1.45	11.682	13.40	125
82	HE	20	---	---	1.688	11.61	?	126
82	HEAT	65	---	---	4.50	21.56	22.94	126a
85	APC-T	367	2.25 1.67 (est)	3.32 3.07 (est)	6.57	12.14	14.26	126b
87	HEAT	241	---	---	2.741	17.957	19.46	127
102	HE	102A3	---	---	3.84	32.06	33.56	128
105	HE	91	2.24	9.80	5.14	17.58	19.40	129
105	HE	91	4.14	6.69	7.52	19.75	22.02	130
107	HE	63	---	---	?	11.63	14.66	131
120	HE	33	---	---	3.06	22.40	23.52	132
120	Frag	33	---	---	2.34	17.69	19.29	133
120	HE	843	---	---	3.37	23.39	26.35	134
122	Prop	?	2.98	5.11 6.40	10.67 15.04	18.78	22 (est)	134a
CZECHOSLOVAKIA								
37	HEI-T	OZT	2.048	1.305	0.92	4.328	6.808	135
37	AP-T	BZT	1.501	0.577	1.084	6.162	6.522	136

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Table IX. Projectile Length (Continued)

Projectile			Base to band upper edge (in)	Rotating band to top of bourrelet (in)	Bourrelet to nose (excluding adapter) (in)	Total unfuzed length (in)	Total fuzed length (in)	Figure No.
Caliber (mm)	Type	Identification						
EURASIAN COMMUNIST COUNTRIES (Continued)								
CZECHOSLOVAKIA (Continued)								
57	AP-T	?	1.793	0.511	2.296	9.168	10.451	137
82	Frag	IKX-51	---	---	1.65	11.63	?	138
82	HEAT	T-21	---	---	2.06	16.47	18.02	139
85	Frag	OF	3.97	3.90	5.71	13.38	15.43	140
100	HE	OF	2.54	5.76	7.13	16.89	19.69	141
100	APC-T	PSv	2.097	0.64	7.606	13.913	16.314	142
120	HE	OF-A	---	---	3.685	23.86	26.14	143
130	HE	RP-2	---	---	20.815	30.29	31.87	144
NORTH VIETNAM								
82	HE	B1	---	---	2.60	---	17.10	144a
100	HEAT	B50	---	---	7.28	---	30.70	145
NORTH KOREA								
82	Frag	O-881	---	---	1.87	21.0	23.93	146
82	HEAT	BK-881	---	---	3.0	23.93	26.89	147
POLAND								
40/80	HEAT	PG-2	---	---	---	19.41	19.41	148
82	HEAT	BK-881	---	---	3.03	23.969	27.787	149
122	Frag-HE	OF-462	4.37	7.79	7.64	19.80	22.17	150

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Table IX. Projectile Length (Continued)

Projectile			Base to band upper edge (in)	Rotating band to top of bourrelet (in)	Bourrelet to nose (excluding adapter) (in)	Total unfuzed length (in)	Total fuzed length (in)	Figure No.
Caliber (mm)	Type	Identification						
EURASIAN COMMUNIST COUNTRIES (Continued)								
YUGOSLAVIA								
76	HE	OF-350	3.864	2.742	5.254	11.86	13.51	151
82	HE	31	---	---	1.93	11.314	13.27	152
120	HE	49	---	---	3.37	25.63	27.13	153
120	HE	56	---	---	2.02	19.91	21.91	154
FREE-WORLD COUNTRIES								
BELGIUM								
83	HEAT		---	---	1.79	21.87	24.75	155
CANADA								
76	HVAPDS-T	M331	1.64	3.48	0.46	9.685	9.685	156
FINLAND								
160	HE	M1955	---	---	8.10	33.57	35.82	157
160	HE	I/53, 1953	---	---	32.89	55.71	66.39	158

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Table IX. Projectile Length (Continued)

Projectile			Base to band upper edge (in)	Rotating band to top of bourrelet (in)	Bourrelet to nose (excluding adapter) (in)	Total unfuzed length (in)	Total fuzed length (in)	Figure No.
Caliber (mm)	Type	Identifi- cation						
FREE-WORLD COUNTRIES (Continued)								
FRANCE								
60	Illum	50	---	---	3.74	10.94	12.76	159
73	HEAT	1950	---	---	---	22.80	22.80	160
90	HEAT	62	2.491	0.725	2.935	17.382	19.598	161
100	AP-T	?	1.98	3.72	9.106	---	15.996	162
105	HE	?	3.90	3.60	8.0	16.25	?	163
105	HEP	?	2.87	7.04	9.07	18.98	18.98	164
105	HEAT	61 OCC	4.17	6.65	6.65	14.395	18.29	165
120	HE	PEPA (Type 1)	---	---	4.75	24.46	27.20	166
120	HE	PRPA	5.65	0.59	6.76	21.18	24.90	167
120	HE	44	---	---	4.62	24.02	26.18	168
120	HE	BT-1-50	---	---	4.1	29.72	31.88	169
155	HE	?	9.78	5.14	7.74	21.39	32.72	170
155	HE	?	5.60	10.32	1.92	25.66	?	171
GERMANY								
88	HE	L/475	1.88	0.388	4.40	11.85	15.50	172
88	APC-T	?	3.229	---	---	13.21	14.253	173
88	APC-T	?	3.229	2.11	---	13.21	14.579	174

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Table IX. Projectile Length (Continued)

Projectile			Base to band upper edge (in)	Rotating band to top of bourrelet (in)	Bourrelet to nose (excluding adapter) (in)	Total unfuzed length (in)	Total fuzed length (in)	Figure No.
Caliber (mm)	Type	Identifi- cation						
FREE-WORLD COUNTRIES (Continued)								
ISRAEL								
52	HE	MK 2/1	—	—	1.10	7.99	9.56	175
52	HE	?	—	—	1.10	7.98	9.55	175a
52	Smoke	MK 1/2	—	—	—	9.235	9.2	176
52	Illum	?	—	—	1.03	—	10.55	176a
81	HE	MK 8/3	—	—	1.655	14.085	15.635	177
81	Smoke	MK 16/3	—	—	1.75	14.085	15.635	178
82	HEAT	?	—	—	—	27.37	29.02	179
82	HE	MK 5	—	—	3.68	21.05	23.05	179a
82	Smoke	MK 5	—	—	3.68	21.05	23.05	179b
88	HE	?	3.56	5.713	4.43	13.704	17.412	180
88	HE	?	3.67	5.03	4.50	13.76	17.50	180a
ITALY								
81	HE	?	—	—	12.0	21.67	23.57	181
SWEDEN								
40	HE	MKII	2.353	1.697	1.10	5.15	7.06	182
80	HEAT	M49	—	—	4.055	22.045	24.725	183
84	HEAT	M48	0.92	4.99	3.24	9.92	12.58	184
84	HEAT	M59	3.55	4.185	3.758	11.493	14.623	185

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Table X. Projectile Diameter (External)

Projectile			Base diameter (in)	Bourrelet diameter (in)	Nose diameter (excluding adapter) (in)	Figure No.
Caliber (mm)	Type	Identifi- cation				
EURASIAN COMMUNIST COUNTRIES						
USSR						
37	Frag-T	OR-167	1.25	1.451	1.17	12
37	Frag-T	OR-167N	1.33	1.45	1.18	12a
37	AP-T	BR-167	1.28	1.450	---	13
37	HEI-T	OZT	1.30	1.452	1.71	14
37	AP-T	BZT	1.325	1.451	---	15
45	Frag	O-240	1.747	1.763	1.56	16
45	AP	B-240	1.524	1.767	---	17
45	AP-T	BR-240	1.53	1.769	---	18
45	AP	BZ-240	1.57	1.765	---	19
45	HVAP-T	BR-240P	1.830	1.767	0.235	20
50	Frag	O-822Sh	---	1.94	1.565	21
50	Frag	O-822	---	1.945	1.70	22
57	Frag	O-271	2.202	2.240	1.56	23
57	Frag	O-271U	2.198	2.238	1.56	24
57	Frag	O-271U	2.20	2.24	1.56	25
57	AP-T	BR-271	2.20	2.238	---	26
57	AP-T	BR-271K	2.18	2.23	---	27
57	AP-T	BR-271SP	2.12	2.238 2.239	---	28
57	HVAP-T	BR-271P	2.18	2.238	---	29
57	Frag	OR-281	1.45	2.240	1.57	30

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Table X. Projectile Diameter (External) (Continued)

Projectile			Base diameter (in)	Bourrelet diameter (in)	Nose diameter (excluding adapter) (in)	Figure No.
Caliber (mm)	Type	Identification				
EURASIAN COMMUNIST COUNTRIES (Continued)						
USSR (Continued)						
57	APC-T	BR-281	2.24	2.2	---	31
57	APC-T	BR-281U	2.24	2.24	0.50	31a
57	Frag-T	OR-281U	2.10	2.24	1.57	32
76	HE	F-354F	2.950	2.980	2.195	33
76	HE	F-354F	2.949	2.977	1.830	34
76	HE	F-354G	2.949	2.981	2.655	35
76	Frag	O-350A	2.33	2.990 2.991	1.56	36
76	Frag-HE	OF-350	2.34	2.98	1.56	37
76	Frag-HE	OF-350A	2.30	2.98	1.60	38
76	Shrap	Sh-354G	2.944	2.985	2.67	39
76	Shrap	Sh-361	2.44	2.993	2.67	40
76	HEAT	BP-353A	2.62	2.98	0.70	41
76	HEAT	BP-350M	2.407	2.990	0.70	42
76	AP-T	BR-350	2.58	2.995	---	43
76	AP-T	BR-350A	2.55	2.995	---	44
76	AP-T	BR-350B	2.734	2.993	---	45
76	AP-T	BR-350B	2.775	2.993	---	46
76	API-T	BZR-350B	2.63	2.994	0.409	47
76	HVAP-T	BR-354P	2.940	2.983	---	48
76	HVAP-T	BR-354P	2.96	2.99	---	49

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Table X. Projectile Diameter (External) (Continued)

Projectile			Base diameter (in)	Bourrelet diameter (in)	Nose diameter (excluding adapter) (in)	Figure No.
Caliber (mm)	Type	Identifi- cation				
EURASIAN COMMUNIST COUNTRIES (Continued)						
USSR (Continued)						
40/80	HEAT	PG-2	1.75	---	0.625	50
40/80	HEAT	PG-7	1.69	1.570	1.02	51
82	Frag	O-832	---	3.202	1.565	52
82	Frag	O-832D	---	3.216	1.578	53
82	Frag	O-832DU	---	3.20	1.55	54
82	Frag	O-881A	1.22	3.217	1.56	55
82	HEAT	BK-881	1.22	3.219	1.56	56
82	HEAT	BK-881M	1.26	3.219	1.56	57
82	HEAT	PG-82	2.122	3.234	1.891	57a
85	Frag	O-365 (two- piece)	2.65	3.361	1.53	58
85	Frag	O-365	2.65	3.341	2.50	59
85	Frag	O-365K	2.65	3.341	1.53	60
85	AP-T	BR-365	2.80	3.340	?	61
85	AP-T	BR-365K	2.725	3.340	?	62
85	HVAP-T	BR-365P	3.295	3.340	?	63
85	HVAP-T	BR-365PK	3.300	3.335	?	64
100	HE	F-412	3.47	3.930	1.57	65
100	AP-T	BR-412	3.590	3.930	?	66
100	AP-T	BR-412B	3.46	3.93	?	67

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Table X. Projectile Diameter (External) (Continued)

Projectile			Base diameter (in)	Muzzle diameter (in)	Muzzle diameter (excluding adapter) (in)	Figure No.
Caliber (mm)	Type	Identification				
EURASIAN COMMUNIST COUNTRIES (Continued)						
USSR (Continued)						
100	APC-T	BR-412D	3.90	3.932	0.23(est)	68
100	APC-T	BR-412D	3.920	3.934	0.23	68a
100	Frag-HE	OF-412	3.42	3.94	1.57	69
100	Frag	O-413	3.45	3.93	0.375	69a
107	Frag-HE	OF-841A	---	4.19	2.54	70
107	Frag-HE	OF-841	---	4.19	2.61	71
107	Frag-HE	OF-883A	1.60	4.20	2.61	72
107	HEAT	BK-883	1.60	4.199	4.120	73
115	HEAT	BK-4	2.00	4.530 4.531	1.563	74
115	HEAT	BK-4	2.025	4.520 4.519	1.575	74a
120	HE	F-843	---	4.700	2.519	75
120	Frag-HE	OF-843	---	4.69	2.33	76
120	Frag-HE	OF-843A	---	4.702	2.54	77
122	HE	F-460	4.742	4.769	1.57	78
122	Frag	O-460A	3.75	4.795	1.83	79
122	Frag-HE	OF-462	3.73	4.80	2.88	80
122	Frag-HE	OF-462	3.56	4.791	1.57	81
122	Frag-HE	OF-462	3.717	4.793	1.56	82
122	Smoke	D-462	3.78	4.80	2.52	83
122	Frag-HE	OF-471N	4.00	4.795	1.56	84
122	Frag-HE	OF-471N	4.15	4.794 4.795	1.57	85
122	Shrap	Sh-462	4.764	4.78	3.40	86

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DEFENSE INTELLIGENCE

PROJECTILE IDENTIFICATION

DEFENSE INTELLIGENCE AGENCY (DIA)



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Table X. Projectile Diameter (External) (Continued)

Projectile			Base diameter (in)	Borelet diameter (in)	Nose diameter (excluding adapter) (in)	Figure No.
Caliber (in)	Type	Identification				
EURASIAN COMMUNIST COUNTRIES (Continued)						
USSR (Continued)						
122	Prop	A-462	4.65	4.805	2.51	87
122	HEAT	BR-460A	4.647	4.787 4.78	1.58	88
122	AP-T	BR-471	4.26	4.781	—	89
122	AP-T	BR-471B	4.234	4.796 4.794	—	90
122	Frag-HE	OF-472	4.22	4.80	1.56	91
122	APC-T	BR-472	4.75	4.80	—	92
122	HEAT	BK-6M	4.92	4.80	1.57	93
130	Frag-HE	?	4.45	5.107	3.56	94
130	AP	?	4.40	5.107	3.532	95
130	Frag-HE	OF-482M	4.84	5.12	2.48	96
130	APC-T	BR-482B	4.64	5.12	—	97
130	Frag-HE	OF-35-42	4.64	5.12	2.48	98
140	Frag-HE	M-14-OF	5.12	5.50 (motor)	1.41	99
152	Frag-HE	OF-540	5.00	5.99	3.57	100
152	Frag-HE	OF-540	5.04	5.98	1.57	101
152	CP	G-530	4.92	5.99	0.45	102
160	HE	F-852	—	6.29	3.54	103
160	HE	F-853U	—	6.28	3.54	103a
160	HE	F-853A	—	6.28	3.53	103b
203	CP	G-620	6.24	7.96	0.81	104
240	HE	?	9.37	9.47 (motor)	3.46	104a
280	CP	G-676	8.528	10.993	0.841	105

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Table X. Projectile Diameter (External) (Continued)

Projectile			Base diameter (in)	Bouffrelet diameter (in)	Nose diameter (excluding adapter) (in)	Figure No.
Caliber (mm)	Type	Identification				
EURASIAN COMMUNIST COUNTRIES (Continued)						
PRC						
57	HE	?	2.136	2.231	1.90	106
57	HEAT	?	1.50	2.236	2.236	107
60	Frag	31	---	2.357	1.575	108
60	Frag	31	---	2.357	1.55	109
60	HE	?	---	2.375	1.18	110
70	HE	92	2.735	2.745	1.65	111
70	HEAT	3	2.73	2.745	2.65	112
75	HE	94	2.75	2.94	1.70	113
75	HE	26.8	2.44	2.941	1.57	114
75	HE	26.12	2.44	2.94	1.575	115
75	HE	?	2.44	2.94	1.55	116
75	HEAT	?	2.475	2.94	1.60	117
75	HEAT	?	0.975	2.91	1.565	118
40/80	HEAT	56	1.54	---	0.625	119
81	HE	?	---	3.2	2.00	120
81	Frag	?	---	3.174	1.57	121
82	HE	53	---	3.201	1.62	122
82	Frag	M30	---	3.198	1.58	123
82	HE	20	---	3.225	1.28	124
82	Frag	20	---	3.23	1.265	125

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Table X. Projectile Diameter (External) (Continued)

Projectile			Base diameter (in)	Bourrelet diameter (in)	Nose diameter (excluding adapter) (in)	Figure No.
Caliber (mm)	Type	Identification				
EURASIAN COMMUNIST COUNTRIES (Continued)						
PRC (Continued)						
82	HE	20	---	3.229	1.265	126
82	HEAT	65	1.249	3.214	1.292	126a
85	APC-T	367	3.30	3.34	0.70 (est)	<del>126b</del>
87	HEAT	241	2.009	3.432	1.25	127
102	HE	102A3	4.00	4.035	1.59	128
105	HE	91	4.09	4.12	1.66	129
105	HE	91	3.55	4.125	1.92	130
107	HE	63	3.93	4.20	1.57	131
120	HE	33	---	4.69	3.09	132
120	HE	33	---	4.68	2.78	133
120	HE	843	---	4.70	2.60	134
122	Prop.	?	4.76	4.79	2.51	134a
CZECHOSLOVAKIA						
37	HEI-T	OZT	1.24	1.451	1.152	135
37	AP-T	BZT	1.357	1.452 1.450	1.45	136
57	AP-T	?	2.237	2.237	---	137
82	Frag	IKX-51	---	3.21	1.40	138
82	HEAT	T-21	1.32	3.215	1.33	139
85	Frag	OF	2.76	3.35	1.54	140
100	HE	OF	3.42	3.932	1.57	141

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Table X. Projectile Diameter (External) (Continued)

Projectile			Base diameter (in)	Bourgelet diameter (in)	Nose diameter (excluding adapter) (in)	Figure No.
Caliber (mm)	Type	Identification				
EURASIAN COMMUNIST COUNTRIES (CONTINUED)						
CZECHOSLOVAKIA (Continued)						
100	APC-T	PSv	3.88	3.926 3.923		142
120	HE	OF-A	1.57	4.72	1.94	143
130	HE	RP-2	5.05	5.11	1.50	144
NORTH VIETNAM						
82	HE	B1	1.221	3.213	3.213	144a
100	HEAT	B50	3.92	1.95		145
NORTH KOREA						
40/45	HE	?	1.59		1.57	145a
82	Frag	O-881	1.26	3.22	1.56	146
82	HEAT	BK-881	1.26	3.21	1.56	147
POLAND						
40/80	HEAT	PG-2	1.50	1.54	0.625	148
82	HEAT	BK-881	1.22	3.219	1.56	149
122	Frag-HE	OF-462	3.78	4.80	1.57	150
YUGOSLAVIA						
76	HE	OF-350	2.34	2.994	1.573	151
82	HE	31	1.228	3.21	1.564	152
120	HE	49	4.69	4.70	2.68	153
120	HE	56	4.69	4.70	2.85	154
FREE-WORLD COUNTRIES						
BELGIUM						
83	HEAT	?	1.81	3.25	1.50	155
CANADA						
76	HVAPDS+T	M-331	3.12	2.997	2.08	156

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Table X. Projectile Diameter, (External) (Continued)

Projectile			Base diameter (in)	Bourrelet diameter (in)	Nose diameter (excluding adapter) (in)	Figure No.
Caliber (mm)	Type	Identification				
FREE-WORLD COUNTRIES (Continued)						
FINLAND						
160	HE	M1955	---	6.30	3.40	157
160	HE	1/53, 1953	---	6.29	1.97	158
FRANCE						
60	Lilum	50	---	2.366	2.332	159
73	HEAT	-1950	1.375	2.87	1.30	160
90	HEAT	62	3.41	3.54	1.256	161
100	AP-T	?	3.94	4.105	3.675	162
105	HE	?	3.53	4.128	2.78	163
105	HEP	?	3.45	4.12	---	164
105	HEAT	61 OCC	3.808	4.125	2.055	165
120	HE	PEPA (Type 1)	---	4.72	4.72	166
120	HE	PRPA	3.77	4.712	2.45	167
120	HE	44	1.80	4.706	1.96	168
120	HE	BT-1-50	1.78	4.70	2.97	169
155	HE	?	4.32	6.095	4.855	170
155	HE	?	5.33	6.084	2.93	171

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Table X. Projectile Diameter (External) (Continued)

Projectile			Base diameter (in)	Muzzlelet diameter (in)	Nose diameter (including adapter) (in)	Figure No.
Caliber (mm)	Type	Identification				
FREE-WORLD COUNTRIES (Continued)						
GERMANY						
88	HE	L/4.5	3.43	3.436	2.385	172
88	APC-T	?	0.73	3.44	---	173
88	APC-T	?	0.942	3.44	---	174
ISRAEL						
52	HE	MK 2/1	---	2.00	2.00	175
52	HE	?	0.81	2.00	2.00	175a
52	Smoke	MK 1/2	---	2.00	2.00	176
52	Illum	?	0.49	2.00	1.97	176a
81	HE	MK 8/3	---	3.175	2.00	177
81	Smoke	MK 16/3	---	3.175	2.00	178
82	HEAT	?	1.46	3.22	0.725	179
82	HE	MK 5	1.95 (var-head base)	3.23	1.48	179a
82	Smoke	MK 5	1.95 (var-head base)	3.23	1.48	179b
88	HE	?	2.71	3.44	2.40	180
88	HE	?	2.25	3.44	2.68	180a
ITALY						
81	HE	?	---	3.135	1.89	181
SWEDEN						
40	HE	MK11	0.937	1.567	1.30	182
80	HEAT	M49	2.025	3.175	0.895	183
84	HEAT	M48	3.26	3.30	0.96	184
84	HEAT	M59	3.10	3.280	0.775	185

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Table XI. Wall Thickness

Projectile			Center of base (in)	Upper edge of rotating band (in)	Bourrelet (in)	Bottom of threading at nose (in)	Figure No.
Caliber (mm)	Type	Identifi- cation					
EURASIAN COMMUNIST COUNTRIES							
USSR			U S S R				
37	Frag-T	OR-167	---	0.25	0.27	---	12
37	Frag-T	OR-167N	0.24	0.25	0.26	0.20 (est)	12a
37	HEI-T	OZT	0.238	0.252	0.252	0.243	14
45	Frag	O-240	0.333	0.421	---	0.16	16
45	AP	B-240	---	0.494	---	---	17
45	AP-T	BR-240	---	0.474	---	---	18
45	API	BZ-240	---	0.48	---	---	19
45	HVAP-T	BR-240P	0.15	0.27	0.49	0.34	20
50	Frag	O-822Sh	---	---	0.32	0.30	21
50	Frag	O-822	---	---	0.29	0.37	22
57	Frag	O-271	0.592	0.475	0.513	0.513	23
57	Frag	O-271U	0.606	0.455	0.495	0.495	24
57	Frag	O-271U	0.595	0.545	0.565	0.565	25
57	HVAP-T	BR-271P	0.460	0.275	0.644	---	29
57	Frag	OR-281	0.335	0.460	0.480	0.350	30
57	APC-T	BR-281	---	0.62	---	---	31
57	APC-T	BR-281U	---	0.62	---	---	31a
57	Frag-T	OR-281U	0.36	0.46	0.48	0.35	32
76	HE	F-354P	0.595	0.458	---	0.57	33
76	HE	F-354P	0.62	0.51	0.38	0.42	34
76	HE	F-354G	0.46	0.40	0.40	0.21	35

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Table XI. Wall Thickness (Continued)

Projectile			Center of base (in)	Upper edge of rotating band (in)	Bourrelet (in)	Bottom of threading at nose (in)	Figure No.
Caliber (mm)	Type	Identification					
EURASIAN COMMUNIST COUNTRIES (Continued)							
USSR (Continued)							
76	Frag	O-350A	0.655	0.691	0.691 0.597	0.22	36
76	Frag-HE	OF-350	0.68	0.54	0.54	0.31	37
76	Frag-HE	OF-350A	0.69	0.52	0.52	0.25	38
76	Shrap	SH-354G	0.38	0.29	0.20	0.13	39
76	Shrap	Sh-361	0.84	0.28	0.212	0.212	40
76	HEAT	BP-353A	0.52	0.48	0.28	0.12	41
76	HEAT	BP-350M	---	0.39	0.31	0.24	42
76	AP-T	BR-350	---	0.73	---	---	43
76	AP-T	BR-350A	---	0.58	---	---	44
76	AP-T	BR-350B	---	0.972	---	---	45
76	AP-T	BR-350B	---	0.715	---	---	46
76	API-T	B2R-350B	---	---	---	---	47
76	HVAP-T	BR-354P	---	0.933	0.953	---	48
76	HVAP-T	BR-354P	---	---	0.945	---	49
40/80	HEAT	PG-2	---	---	0.083	---	50
40/80	HEAT	PG-7	---	---	0.21	0.06	51
82	Frag	O-832	---	---	0.38	0.34	52
82	Frag	O-832D	---	---	0.307	0.385	53
82	Frag	O-832DU	---	---	0.375	0.402	54

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Table XI. Wall Thickness (Continued)

Projectile			Center of base (in)	Upper edge of rotating band (in)	Bourrelet (in)	Bottom of threading at nose (in)	Figure No.
Caliber (mm)	Type	Identification					
EURASIAN COMMUNIST COUNTRIES (Continued)							
USSR (Continued)							
82	Frag	O-881A	?	---	0.40	0.40	55
82	HEAT	BK-881	?	---	0.25	0.20	56
82	HEAT	BK-881M	---	---	0.25	0.20	57
82	HEAT	PG-82	0.37	---	0.201	0.057	57a
85	Frag	O-365 (2-piece)	1.00	0.72	0.72	0.58	58
85	Frag	O-365	1.03	0.72	0.72	0.55	59
85	Frag	OR-365K	0.95	0.73	0.73	0.35	60
85	AP-T	BR-365	---	1.15	---	---	61
85	AP-T	BR-365K	---	1.15	---	---	62
100	HE	F-412	0.978	0.73	0.72	0.25	65
100	AP-T	BR-412	---	1.444	---	---	66
100	AP-T	BR-412B	---	1.471	---	---	67
100	APC-T	BR-412D	---	1.48	---	---	68
100	APC-T	BR-412D	---	1.41	---	---	68a
100	Frag-HE	OF-412	0.98	0.75	0.77	0.40	69
100	Frag	O-412	0.971	0.756	0.724	0.444	69a
107	Frag-HE	OF-841A	---	---	0.50	0.65	70
107	Frag-HE	OF-841	---	---	0.467	0.60	71
107	Frag-HE	OF-883A	---	---	0.40	0.50	72
107	HEAT	BK-883	---	---	0.22	0.40	73
115	HEAT	BK-4	0.360	0.420	0.384	0.25	74
115	HEAT	BK-4	?	?	0.194	?	74a
120	HE	F-843	---	---	0.40	0.36	75

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Table XI. Wall Thickness (Continued)

Projectile			Center of base (in)	Upper edge of rotating band (in)	Bourrelet (in)	Bottom of threading at nose (in)	Figure No.
Caliber (mm)	Type	Identifi- cation					
EURASIAN COMMUNIST COUNTRIES (Continued)							
USSR (Continued)							
120	Frag-HE	OF-843	---	---	0.74	0.70	76
120	Frag-HE	OF-843A	0.616	---	0.653	0.75	77
122	HE	F-460	1.225	0.57	0.58	0.42	78
122	Frag	O-460A	0.12	1.09	0.80	0.46	79
122	Frag-HE	OF-462	1.15	0.70	0.47	0.29	80
122	Frag-HE	OF-462	1.026	0.75	0.62	0.37	81
122	Frag-HE	OF-462	1.03	0.673	0.667	0.334	82
122	Smoke	D-462	0.98	0.73	0.57	0.39	83
122	Frag-HE	OF-471N	1.09	0.78	0.65	0.32	84
122	Frag-HE	OF-471N	1.10	0.95	0.659 0.919	0.22	85
122	Shrap	Sh-462	0.77	0.55	0.470	0.223	86
122	Prop	A-462	0.77	0.55	0.57	0.223	87
122	HEAT	BR-460A	0.989	0.753	---	---	88
122	AP-T	BR-471	---	1.46	---	---	89
122	AP-T	BR-471B	---	1.430	0.32 0.67	---	90
122	Frag-HE	OF-472	1.16	0.55	0.55	0.87	91
122	APC-T	BR-472	---	1.43	---	---	92
122	HEAT	BK-6M	---	0.67	0.32 0.67	0.35	93

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Table XI. Wall Thickness (Continued)

Projectile			Center of base (in)	Upper edge of rotating band (in)	Muzzlelet (in)	Bottom of threading at nose (in)	Figure No.
Caliber (mm)	Type	Identification					
EURASIAN COMMUNIST COUNTRIES (Continued)							
USSR (Continued)							
130	Frag-HE	?	0.875	1.149	1.188	1.188	94
130	AP	?	1.772	—	—	—	95
130	Frag-HE	OF-482M	1.16	1.10	1.10	0.59	96
130	APC-T	BR-482B	—	1.66	—	—	97
130	Frag-HE	OF-35-42	—	1.14	1.16	0.59	98
140	Frag-HE	M-14-OF	—	—	0.61 (warhead)	0.37	99
152	Frag-HE	OF-540	1.23	1.01	0.83	0.25	100
152	Frag-HE	OF-540	1.26	1.22	0.90	0.59	101
152	CP	G-530	—	0.94	0.77	—	102
160	HE	F-852	0.525	—	0.660	—	103
160	HE	F-8530	0.56	—	0.60	0.81	103a
160	HE	F-853A	0.70	—	0.63	0.42	103b
203	CP	G-620	—	1.27	0.92	—	104
240	HE	?	—	—	0.31 (warhead)	0.42	104a
PRC							
57	HE	?	0.32	0.17	0.17	0.20	106
57	HE	?	—	0.17	0.17	0.17	107
60	Frag	31	0.398	—	0.35	0.398	108
60	Frag	31	0.383	—	0.34	0.34	109
60	HE	?	—	—	?	0.16	110
70	HE	92	0.58	0.31	0.28	0.38	111
70	HEAT	3	0.550	0.380	0.24	0.24	112

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Table XI. Wall Thickness (Continued)

Projectile			Center of base (in)	Upper edge of rotating band	Muzzlelet (in)	Bottom of threading at nose	Figure No.
Caliber (mm)	Type	Identifi- cation					
EUROPEAN COUNTRIES (Continued)							
PRC (Continued)							
75	HE	94	0.76	0.37	0.38	0.50	113
75	HE	26.8	0.60	0.60	0.45 0.60	0.20	114
75	HE	26.12	0.63	0.610	0.44 0.610	0.35	115
75	HE	?	0.63	0.61	0.57 0.44	0.25	116
75	HEAT	57	—	0.420	0.28	0.188	117
75	HEAT	?	—	—	0.18	?	118
40/80	HEAT	56	—	—	0.08	?	119
81	HE	?	0.20	—	0.30	0.45	120
81	Frag	?	0.41	—	0.46	0.40	121
82	HE	93	0.28	—	0.45	0.50	122
82	Frag	M30	0.284	—	0.317	0.519	123
82	HE	20	0.43	—	0.55	0.68	124
82	Frag	20	0.37	—	0.50	0.81	125
82	HE	20	0.469	—	0.50	0.594	126
82	HEAT	65	0.24	—	0.14	0.28	126a
85	APC-T	367	—	1.07	—	—	126b
87	HEAT	241	—	—	0.14	—	127
102	HE	102A3	0.80	—	0.30	0.50	128
105	HE	91	0.87	0.62	0.49	0.74	129
105	HE	91	1.41	0.61	0.47	0.16	130

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Table II. Wall Thickness (Continued)

Projectile			Center of base (in)	Upper edge of retarding band (in)	Mourellet (in)	Bottom of threading at nose (in)	Figure No.
Caliber (mm)	Type	Identification					
EUROPEAN COMMUNIST COUNTRIES (Continued)							
FRG (Continued)							
107	HE	63	0.16	---	0.61	0.35	131
120	HE	33	0.40	---	0.33	0.54	132
120	Frag	33	0.55	---	0.67	1.19	133
120	HE	843	---	---	0.81	0.69	134
122	Prop	1	---	0.63	0.63	0.26	134a
CZECHOSLOVAKIA							
37	HEI-T	OZT	0.23	0.24	0.24	0.20	135
82	Frag	IKK-51	0.10	---	0.36	0.72	138
82	HEAT	T-21	---	---	0.07	0.16	139
85	Frag	OF	0.98	0.73	0.73	0.55	140
100	HE	OF	0.97	0.73	0.74	0.42	141
100	APC-T	PSV	---	1.402	---	---	142
120	HE	OF-A	---	---	0.76	0.65	143
130	HE	RF-2	---	---	0.205	0.24	144
NORTH VIETNAM							
82	HE	B1	---	---	0.091	---	144a
NORTH KOREA							
40/45	HE	LCC-32	---	0.284 (center body)	---	0.237	145a
82	Frag	O-881	0.59	---	0.50	0.34	146
82	HEAT	HK-881	0.31	---	0.32	0.10	147
POLAND							
40/80	HEAT	PG-2	---	---	0.083	---	148
82	HEAT	HK-881	---	---	0.25	0.20	149
122	Frag-HE	OF-462	0.98	0.87	0.87	0.53	150

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Table XI. Wall Thickness (Continued)

Projectile			Center of base (in)	Upper edge of rotating band (in)	Bourrelet (in)	Bottom of threading at nose (in)	Figure No.
Caliber (mm)	Type	Identification					
EURASIAN COMMUNIST COUNTRIES (Continued)							
YUGOSLAVIA							
76	HE	OF-350	0.689	0.574	0.559 0.574	0.333	151
82	HE	31	0.135	---	0.397	0.514	152
120	HE	49	?	---	0.44	?	153
120	HE	54	?	---	0.44	?	154
FREE-WORLD COUNTRIES							
BELGIUM							
83	HEAT	?	---	---	0.21	0.10	155
FINLAND							
160	HE	M1955	1.16	---	1.15	0.69	157
160	HE	1/53 1953	---	---	---	0.318	158
FRANCE							
60	111mm	50	---	---	0.195	0.06	159
73	HEAT	1950	---	---	---	---	160
90	HEAT	62	---	?	?	0.33	161
105	HE	?	0.578	0.60	0.56	0.40	163
105	HEP	?	---	0.453	?	0.382	164
105	HEAT	61 OCC	0.45	0.395	0.125	---	165
120	HE	PEPA (Type 1)	---	---	0.30	?	166

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Table XI. Wall Thickness (Continued)

Projectile			Center of base (in)	Upper edge of rotating band (in)	Bourrelet (in)	Bottom of threading at nose (in)	Figure No.
Caliber (mm)	Type	Identifi- cation					
FREE-WORLD COUNTRIES (Continued)							
FRANCE (Continued)							
120	HE	PRPA		0.28	0.30	0.60	167
120	HE	44	0.39	—	0.478	0.45	168
120	HE	BT-1-50	0.411	—	0.381	0.779	169
155	HE	?	0.68	0.907	0.94	0.27	170
155	HE	?	0.60	0.65	0.60	0.50	171
GERMANY							
88	HE	L/4.5	—	0.597	0.602	0.50	172
88	APC-T	?	—	1.11	1.11	—	173
88	APC-T	?	—	0.71	?	—	174
ISRAEL							
52	Illum	?	—	—	0.055	—	176a
81	HE	MK 8/3	1.37	—	0.28	0.40	177
81	Smoke	MK 16/3	1.37	—	0.28	0.40	178
82	HEAT	?	—	—	0.092	0.065	179
82	HE	MK 5	0.24	—	0.28	0.26	179a
82	Smoke	MK 5	0.24	—	0.28	0.26	179b
88	HE	?	1.025	0.65	0.64	0.40	180
88	HE	?	1.04	0.70	0.65	0.40	180a
ITALY							
81	HE	?	0.31	—	0.15	0.42	181

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Table XI. Wall Thickness (Continued)

Projectile			Center of base (in)	Upper edge of rotating band (in)	Bourrelet (in)	Bottom of threading at nose (in)	Figure No.
Caliber (mm)	Type	Identification					
FREE-WORLD COUNTRIES. (Continued)							
SWEDEN							
40	HE.	MkII	?	0.243	0.243	0.20	182
80	HEAT	M49	?	---	0.035	0.055	183
84	HEAT	M48	?	---	0.12	0.05	184
84	HEAT	M59	0.12	---	0.14	0.125	185

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Table XII. Thread Count

Projectile			Fuze seating (per in)	Adapter pocket (per in)	Screw-on section of ogive (per in)	Base plug (per in)	Figure No.
Caliber (mm)	Type	Identification					
EURASIAN COMMUNIST COUNTRIES							
USSR							
37	Frag-T	OR-167	18	---	---	24	12
37	Frag-T	OR-167N	18	---	---	18 (tracer body)	12a
37	AP-T	BR-167	---	---	---	16	13
37	HEI-T	OZT	17	---	---	25.6	14
37	AP-T	BZT	---	---	---	17	15
45	Frag	O-240	10	---	---	---	16
45	AP	B-240	16	---	---	---	17
45	AP-T	BR-240	16	---	---	---	18
45	API	BZ-240	16	---	---	---	19
45	HVAP-T	BR-240P	---	---	18	32	20
50	Frag	O-822Sh	10	---	---	---	21
50	Frag	O-822	10	16	---	16	22
57	Frag	O-271	10	---	---	---	23
57	Frag	O-271U	10	---	---	---	24
57	Frag	O-271U	10	---	---	---	25
57	AP-T	BR-271	16	---	---	---	26
57	AP-T	BR-271K	17	---	---	---	27
57	AP-T	BR-271SP	---	---	---	16	28
57	HVAP-T	BR-271P	10	---	---	17	29
57	Frag-T	OR-281	10	---	---	10	30
57	APC-T	BR-281	16	---	---	---	31
57	APC-T	BR-281U	16	---	---	---	31a

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Table XII. Thread Count (Continued)

Projectile			Fuze seating (per in)	Adapter pocket (per in)	Screw-on section of ogive (per in)	Base plug (per in)	Figure No.
Caliber (mm)	Type	Identifi- cation					
EURASIAN COMMUNIST COUNTRIES (Continued)							
USSR (Continued)							
57	Frag-T	OR-281U	10	---	---	10	32
76	HE	F-354F	13	13	---	---	33
76	HE	F-354F	13	13	---	---	34
76	HE	F-354G	10	---	12	---	35
76	Frag	O-350A	10	---	---	---	36
76	Frag-HE	OF-350	10	---	13	---	37
76	Frag-HE	OF-350A	10	---	---	---	38
76	Shrap	Sh-354G	6	---	---	---	39
76	Shrap	Sh-361	9	26	---	---	40
76	HEAT	BP-353A	26	---	16	---	41
76	HEAT	BP-350M	26	---	16	---	42
76	AP-T	BR-350	16	---	---	18	43
76	AP-T	BR-350A	16	---	---	---	44
76	AP-T	BR-350B	18	---	---	---	45
76	AP-T	BR-350B	16	---	---	13	46
76	API-T	BZR-350B	16	---	---	13	47
76	HVAP-T	BR-354P	---	---	---	18	48
76	HVAP-T	BR-354P	---	---	---	18	49
40/80	HEAT	PG-7	26	---	17	---	51
82	Frag	O-832	10	---	---	---	52

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Table XII. Thread Count (Continued)

Projectile			Fuze seating (per in)	Adapter pocket (per in)	Screw-on section of ogive (per in)	Base plug (per in)	Figure No.
Caliber (mm)	Type	Identifi- cation					
EURASIAN COMMUNIST COUNTRIES (Continued)							
USSR (Continued)							
82	Frag	O-832D	10	---	---	---	53
82	Frag	O-832DU	10	---	---	---	54
82	Frag	O-881A	10	---	---	---	55
82	HEAT	BK-881	10	---	20	---	56
82	HEAT	BK-881M	10	---	20	---	57
82	HEAT	PG-82	10	---	---	---	57a
85	Frag	O-365	10	---	8	---	58
85	Frag	O-365	9	---	---	---	59
85	Frag	O-365K	10	---	---	---	60
85	AP-T	BR-365	18	---	---	---	61
85	AP-T	BR-365K	18	---	---	---	62
85	HVAP-T	BR-365P	---	---	9	18	63
85	HVAP-T	BR-365PK	---	---	9	18	64
100	HE	F-412	10	---	---	---	65
100	AP-T	BR-412	18	---	---	---	66
100	AP-T	BR-412B	14	---	---	---	67
100	APC-T	BR-412D	13	---	---	---	68
100	APC-T	BR-412D	13	---	---	---	68a
100	Frag-HE	OF-412	10	---	---	---	69
100	Frag	O-415	9	---	---	---	69a
107	Frag-HE	OF-841A	10	17	---	---	70
107	Frag-HE	OF-841	10	10	17	---	71
107	Frag-HE	OF-883A	10	17	---	---	72

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Table XII. Thread Count (Continued)

Projectile			Fuze seating (per in)	Adapter pocket (per in)	Screw-on section of ogive (per in)	Base plug (per in)	Figure No.
Caliber (mm)	Type	Identifi- cation					
EURASIAN COMMUNIST COUNTRIES (Continued)							
USSR (Continued)							
107	HEAT	BK-883	10	---	17	---	73
115	HEAT	BK-4	10	---	17	---	74
115	HEAT	BK-4	10	---	17	---	74a
120	HE	F-843	10	18	---	---	75
120	Frag-HE	OF-843	10	16	---	---	76
120	Frag-HE	OF-843A	10	17	---	---	77
122	HE	F-460	10	---	---	12	78
122	Frag	O-460A	10	---	---	---	79
122	Frag-HE	OF-462	10	---	---	---	80
122	Frag-HE	OF-462	10	---	---	---	81
122	Frag-HE	OF-462	---	---	---	---	82
122	Smoke	D-462	6	---	---	---	83
122	Frag-HE	OF-471N	10	---	---	---	84
122	Frag-HE	OF-471N	10	---	---	---	85
122	Shrap	Sh-462	9	---	---	---	86
122	Prop	A-462	6	9	---	25	87
122	HEAT	BP-460A	10	---	13	---	88
122	AP-T	BR-471	18	---	---	12	89
122	AP-T	BR-471B	18	---	---	13	90
122	Frag-HE	OF-472	10	---	---	---	91

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Table XII. Thread Count (Continued)

Projectile			Fuze seating (per in)	Adapter pocket (per in)	Screw on section of ogive (per in)	Base plug (per in)	Figure No.
Caliber (mm)	Type	Identifi- cation					
EURASIAN COMMUNIST COUNTRIES (Continued)							
USSR (Continued)							
122	APC-T	BR-472	13	9	---	---	92
122	HEAT	BK-6M	10	---	13	13	93
130	Frag-HE	?	10	---	---	---	94
130	AP	?	6	48	---	---	95
130	Frag-HE	OF-482M	10	10	?	---	96
130	APC-T	BR-482B	13	---	---	13	97
130	Frag-HE	OF-3S-42	10	---	---	9	98
140	Frag-HE	M-14-OF	10	---	---	13	99
152	Frag-HE	OF-540	10	---	13	---	100
152	Frag-HE	OF-540	10	---	---	---	101
152	CP	G-530	5	---	8	---	102
160	HE	F-852	9	9	---	---	103
160	HE	F-853U	10	9	---	---	103a
160	HE	F-853A	10	9	---	---	103b
203	CP	G-62Q	5	---	7	---	104
240	HE	?	10	13	---	---	104a
280	CP	G-674	5	---	---	---	105
PRC							
57	HE	?	10	---	---	---	106
57	HEAT	?	16	---	---	16	107
60	Frag	3I	10	---	---	---	108
60	Frag	3I	10	---	---	---	109
60	HE	?	12	---	12	---	110

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Table XII. Thread Count (Continued)

Projectile			Fuze seating (per in)	Adapter pocket (per in)	Screw-on section of ogive (per in)	Base plug (per in)	Figure No.
Caliber (mm)	Type	Identification					
EURASIAN COMMUNIST COUNTRIES (Continued)							
PRC (Continued)							
70	HE	92	13	16	—	—	111
70	HEAT	3	13	—	12	—	112
75	HE	94	14	—	—	—	113
75	HE	26.8	10	—	—	—	114
75	HE	26.12	10	—	—	—	115
75	HE	?	10	—	—	—	116
75	HEAT	?	10	—	20	17	117
75	HEAT	?	7	—	16	—	118
81	HE	?	10	—	—	—	120
81	HE	?	10	—	—	—	121
82	HE	53	10	—	—	—	122
82	HE	M30	10	—	—	—	123
82	HE	20	13	—	—	—	124
82	HE	20	17	—	—	—	125
82	HE	20	12	—	—	—	126
82	HEAT	65	17	—	17	17	126a
85	APC-T	367	12	—	—	—	126b
87	HEAT	241	13	—	—	—	127
102	HE	102A3	10	—	—	—	128
105	HE	91	12	17	—	—	129
105	HE	91	13	12	—	—	130
107.6	HE	63	10	—	—	—	131



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Table XII. Thread Count (Continued)

Projectile			Fuse seating (per in)	Adapter pocket (per in)	Screw-on section of ogive (per in)	Base plug (per in)	Figure No.
Caliber (mm)	Type	Identification					
EUROPEAN COMMUNIST COUNTRIES (Continued)							
PRC (Continued)							
120	HE	33	12	12	—	—	132
120	HE	33	12	12	—	—	133
120	HE	843	10	—	18	—	134
122	Prop	1	6 (est)	9	—	17	134a
CZECHOSLOVAKIA							
37	HEI-T	OZY	17	—	—	26	135
37	AP-T	BZT	—	—	—	17	136
57	AP-T	1	18	—	—	—	137
82	Frags	MX-51	10	—	—	—	138
82	HEAT	T-21	26	—	—	—	139
85	Frags	OF	10	—	—	—	140
100	HE	OF	10	—	—	—	141
100	AFC-T	PSV	12	—	—	—	142
120	HE	OF-A	10	17	—	17	143
130	HE	RP-2	10	—	17	8	144
NORTH VIETNAM							
82	HE	B1	17	—	17	17	144a
NORTH KOREA							
40/45	HE	LCC-32	10	—	—	—	145a
82	Frags	O-881	10	—	—	—	146
82	HEAT	BK-881	10	—	20	—	147
POLAND							
82	HEAT	BK-881	10	—	20	—	149
122	Frags HE	OF-662	10	—	—	—	150

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Table XII. Thread Count (Continued)

Projectile			Fuze seating (per in)	Adapter pocket (per in)	Struck on section of ogive (per in)	Base plug (per in)	Figure No.
Caliber (mm)	Type	Identifi- cation					
EURASIAN COMMUNIST COUNTRIES (Continued)							
YUGOSLAVIA							
76	HE	OF-350	10	---	---	---	151
82	HE	31	13	17	---	---	152
120	HE	49	13	13	---	---	153
120	HE	156	13	13	---	---	154
FREE-WORLD COUNTRIES							
BELGIUM							
83	HEAT	?	40	---	---	---	155
CANADA							
76	HVAPDS-T	M331	---	---	16	32	156
FINLAND							
160	HE	M1955	13	10	---	---	157
160	HE	1/S3 1953	16	---	---	---	158
FRANCE							
60	Illum	50	20	---	---	---	159
90	HEAT	62	17	---	17	17	161
100	AP-T	?	---	---	13	13	162
105	HE	?	9	---	---	---	163
105	HEP	?	13	---	18	20	164
105	HEAT	61 OCC	16	18	18	17	165

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Table XII. Thread Count (Continued)

Projectile			Fuze seating (per in)	Adapter pocket (per in)	Screw-on section of ogive (per in)	Base plug (per in)	Figure No.
Caliber (mm)	Type	Identifi- cation					
FREE-WORLD COUNTRIES (Continued)							
FRANCE (Continued)							
120	HE	PEPA (Type 1)	7	13	18 1/2	—	166
120	HE	PEPA	12	—	—	14	167
120	HE	44	13	13	—	—	168
120	HE	BT-1-50	13	13	—	—	169
155	HE	?	9	—	—	—	170
155	HE	?	9	—	—	—	171
GERMANY							
88	HE	L/4.5"	9	—	—	13	172
88	APC-T	?	17	—	—	—	173
88	APC-T	?	9	—	—	—	174
ISRAEL							
52	HE	MK 2/1	20	—	—	—	175
52	HE	?	20	—	—	—	175a
52	Illum	?	16	—	—	16	176a
81	HE	MK 8/3	20	—	—	—	177
81	Smoke	MK 16/3	20	—	—	—	178
82	HEAT	?	8	—	—	—	179
82	HE	MK 5	13	16	—	—	179a
82	Smoke	MK 5	13	16	—	—	179b
88	HE	?	12	—	—	—	180
88	HE	?	12	13	13	—	180a
ITALY							
81	HE	?	15	13	—	—	181

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ST-CM-07-29-74

Original

Table XII. Thread Count (Continued)

Projectile			Fuze seating (per in)	Adapter pocket (per in)	Screw-on section of ogive (per in)	Base plug (per in)	Figure No.
Caliber (mm)	Type	Identification					
FREE-WORLD COUNTRIES (Continued)							
SWEDEN							
40	HE	M411	14				182
80	HEAT	M49	15				183
84	HEAT	M48	12			17	184
84	HEAT	M59	20		16	16	185

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ST-CW-C7-29-74

Table XIII. Fins (Finned Projectile)

Projectile			Number of fins	Maximum diameter of fins (in)	Thickness of fins (in)	Number of rows of vents	Figure No.
Caliber (mm)	Type	Identification					
EURASIAN COMMUNIST COUNTRIES							
USSR							
50	Frag	O-822Sh	44	1.94	0.048	4	21
50	Frag	O-822	6	1.94	0.068	4	22
40/80	HEAT	PG-2	6	4.61	0.013	—	50
40/80	HEAT	PG-7	4	11.10	0.119	546	51
82	Frag	O-832	6	3.235	0.085	6	52
82	Frag	O-832D	10	3.22	0.083	6	53
82	Frag	O-832DU	10	3.22	0.10	6	54
82	Frag	O-881A	4	3.217	0.103	6	55
82	HEAT	BK-881	4	3.217	0.103	6	56
82	HEAT	BK-881M	4	3.217	0.103	6	57
82	HEAT	PG-82	6	3.810	0.066	—	57a
107	Frag-HE	OF-841A	8	4.19	0.10	6	70
107	Frag-HE	OF-841	8	4.19	0.10	6	71
107	Frag-HE	OF-883A	8	4.20	0.103	6	72
107	HEAT	BK-883	8	4.135	0.103	6	73
115	HEAT	BK-4	6	16.53	0.120-0.200	—	74
115	HEAT	BK-4	6	16.50	0.24	—	74a
120	HE	F-843	12	4.701	0.088	6	75
120	Frag-HE	OF-843	12	4.57	0.09	6	76
120	Frag-HE	OF-843A	12	4.702	0.088	6	77
122	HEAT	BK-6M	6	14.39	0.12-0.20	—	93
160	HE	F-852	10	6.3	0.123	6	103
160	HE	F-853U	10	5.90	0.15	4 (12 holes)	103a
160	HE	F-853A	10	5.90	0.15	4 (12 holes)	103b

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ST-CN-07-29-74

Original

Table XIII. Fins (Finned Projectiles) (Continued)

Projectile			Number of fins	Maximum diameter of fins (in)	Thickness of fins (in)	Number of rows of vents	Figure No.
Caliber (mm)	Type	Identification					
EURASIAN COMMUNIST COUNTRIES (Continued)							
PRC							
60	Frag	31	8	2.365	0.662	8	108
60	Frag	31	8	2.355	0.05	8	109
60	HE	7	8	2.35	0.07	8	110
75	HEAT	7	8	2.80	0.065	---	117
40/80	HEAT	56	6	4.60	0.01	---	119
81	HE	7	6	3.215	0.05	6	120
81	HE	7	6	3.174	0.05	6	121
82	HE	53	6	3.201	0.065	6	122
82	HE	M30	10	3.214	0.09	10	123
82	HE	20	8	3.21	0.10	8	124
82	HE	20	8	3.22	0.06	8	125
82	HE	20	8	3.221	0.07	8	126
82	HEAT	65	4	3.211	0.124	10	126a
87	HEAT	241	4	3.404	0.067	---	127
102	HE	102A3	6	?	0.11	---	128
120	HE	33	12	4.70	0.10	12	132
120	HE	33	8	4.686	0.09	8	133
120	HE	843	10	4.70	0.11	6	134
CZECHOSLOVAKIA							
82	Frag	IKX-51	8	3.11	0.06	6	138
82	HEAT	T-21	12	3.19	0.05	8	139
120	HE	OF-A	12	4.702	0.088	6	143

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Original

ST-CW-07-29-74

Table XIII. Fins (Finned Projectiles). (Continued)

Projectile			Number of fins	Maximum diameter of fins (in)	Thickness of fins (in)	Number of rows of vents	Figure No.
Caliber (mm)	Type	Identifi- cation					
EURASIAN COMMUNIST COUNTRIES (Continued)							
NORTH VIETNAM							
82	HE	B1	10	3.176	0.091	6	144a
100	HEAT	B50	6	3.90	0.12	---	145
NORTH KOREA							
40/45	HE	LCC-32	6	4.61	0.013	---	145a
82	Frag	O-881	4	3.22	0.10	6	146
82	HEAT	BK-881	4	3.21	0.10	6	147
POLAND							
40/80	HEAT	PG-2	6	4.85	0.083	---	148
82	HEAT	BK-881	4	3.217	0.103	6	149
YUGOSLAVIA							
82	HE	31	10	3.205	0.091	6	152
120	HE	49	12	4.69	0.08	4	153
120	HE	56	12	4.69	0.08	4	154
FREE-WORLD COUNTRIES							
BELGIUM							
83	HEAT	?	16	3.16	0.043	---	155
FINLAND							
160	HE	M1955	10	6.31	0.204	8	157
160	HE	1/53, 1953	10	6.29	0.021	8	158
FRANCE							
60	Illum	50	8	2.35	0.085	8	159
73	HEAT	1950	12	2.87	0.067	---	160

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ST-CW-07-29-74

Original

Table XIII.. Fins (Finned Projectiles) (Continued)

Projectile			Number of fins	Maximum diameter of fins (in)	Thickness of fins (in)	Number of rows of vents	Figure No.
Caliber (mm)	Type	Identification					
FREE-WORLD COUNTRIES (Continued)							
FRANCE (Continued)							
90	HEAT	62	6	3.52	0.265	6	161
120	HE	PEPA (Type I)	10	4.73	0.19	8	166
120	HE	44	12	4.692	0.082	8	168
120	HE	BT-1-50	12	4.692	0.082	8	169
ISRAEL							
52	HE	MK 2/1	6	1.99	0.046	5	175
52	HE	?	6	2.00	0.05	5	175a
52	Smoke	MK 1/2	6	1.99	0.046	5	176
52	Illum	?	6	2.00	0.05	5	176a
81	HE	MK 8/3	6	3.165	0.07	5	177
81	Smoke	MK 16/3	6	3.165	0.07	5	178
82	HEAT	?	12	3.22	0.035	—	179
82	HE	MK 5	12	3.22	0.035	—	179a
82	Smoke	MK 5	12	3.22	0.035	—	179b
ITALY							
81	HE	?	8	5.15	0.06	6	181
SWEDEN							
80	HEAT	M49	6	8.52	0.03-0.133	—	183

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Section III.

PROJECTILE DATA AND DRAWINGS

1. PROJECTILE DRAWINGS

The drawings in this section show enlarged cutaway views of rotating band seats and side, sectional, and base views of projectiles of the Eurasian Communist and Free World countries. Appropriate critical dimensions are given when possible. The drawings were prepared only after careful examination of the actual projectile. Data appearing on the drawings are sufficiently accurate to permit identification of projectiles from their fragments, provided the recommended procedure for analyzing fragments is closely followed. These drawings are keyed by figure number to the ready reference tables in Section II.

2. PROJECTILE DATA.

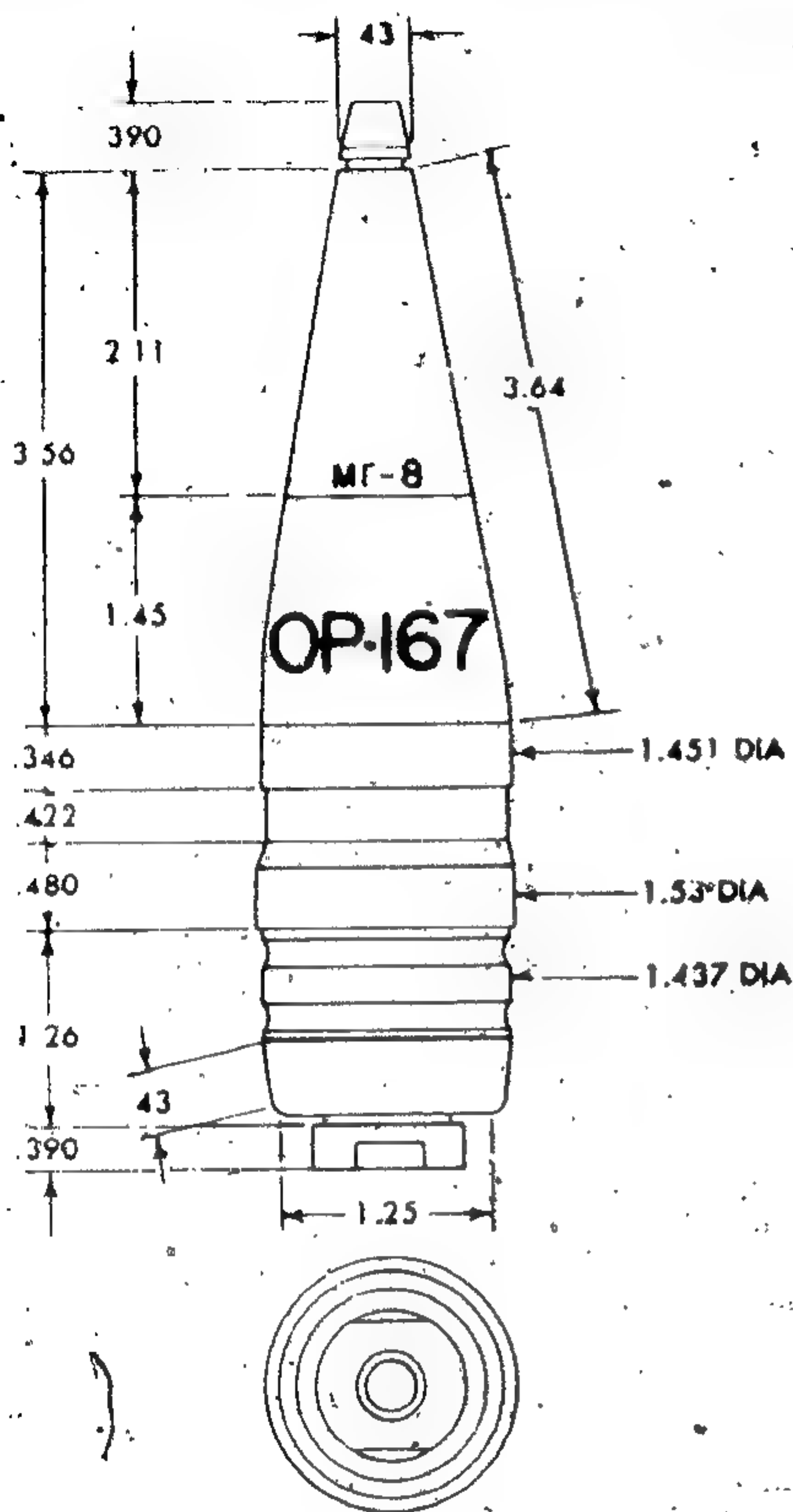
With each projectile illustration, additional information is given on the projectile, and the weapon or weapons in which it is known to be used are identified. Weapons are identified only when there is evidence that they fire the illustrated projectile, and the actual model designation of the projectile is shown if available. Detailed coverage of significant characteristics and performance of firing weapons can be found in appendix I.

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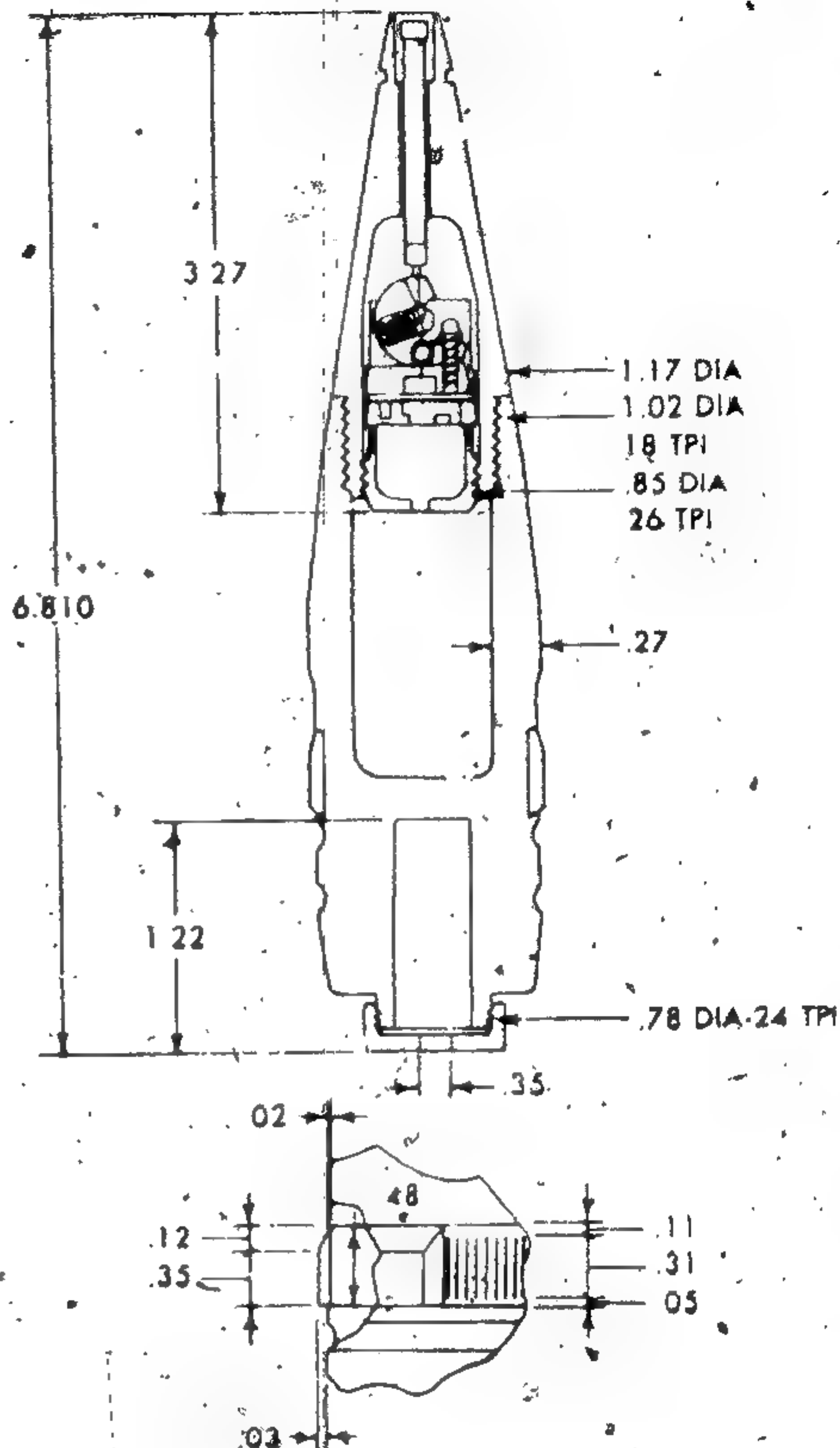
SI-CW-07-29-74

Original



ALL DIMENSIONS IN INCHES

Neg. 502812



28 INDENTATIONS PER INCH

Caliber ----- 37 mm  
 Identification ----- OR-167  
 Type ----- Frag-T  
 Weight (fuzed) ----- 1.60 lb  
 Bursting charge ----- 0.077 lb  
 RDX/aluminum

Fuze ----- Model MG-8 point  
 detonating, self-  
 destroying  
 Known using weapons- AA gun M1939 and  
 SP AA gun SU-37  
 Remarks ----- Also uses Model  
 MG-37 point-  
 detonating, self-  
 destroying fuze.

Figure 12. Soviet 37-mm frag-T projectile Model OR-167.

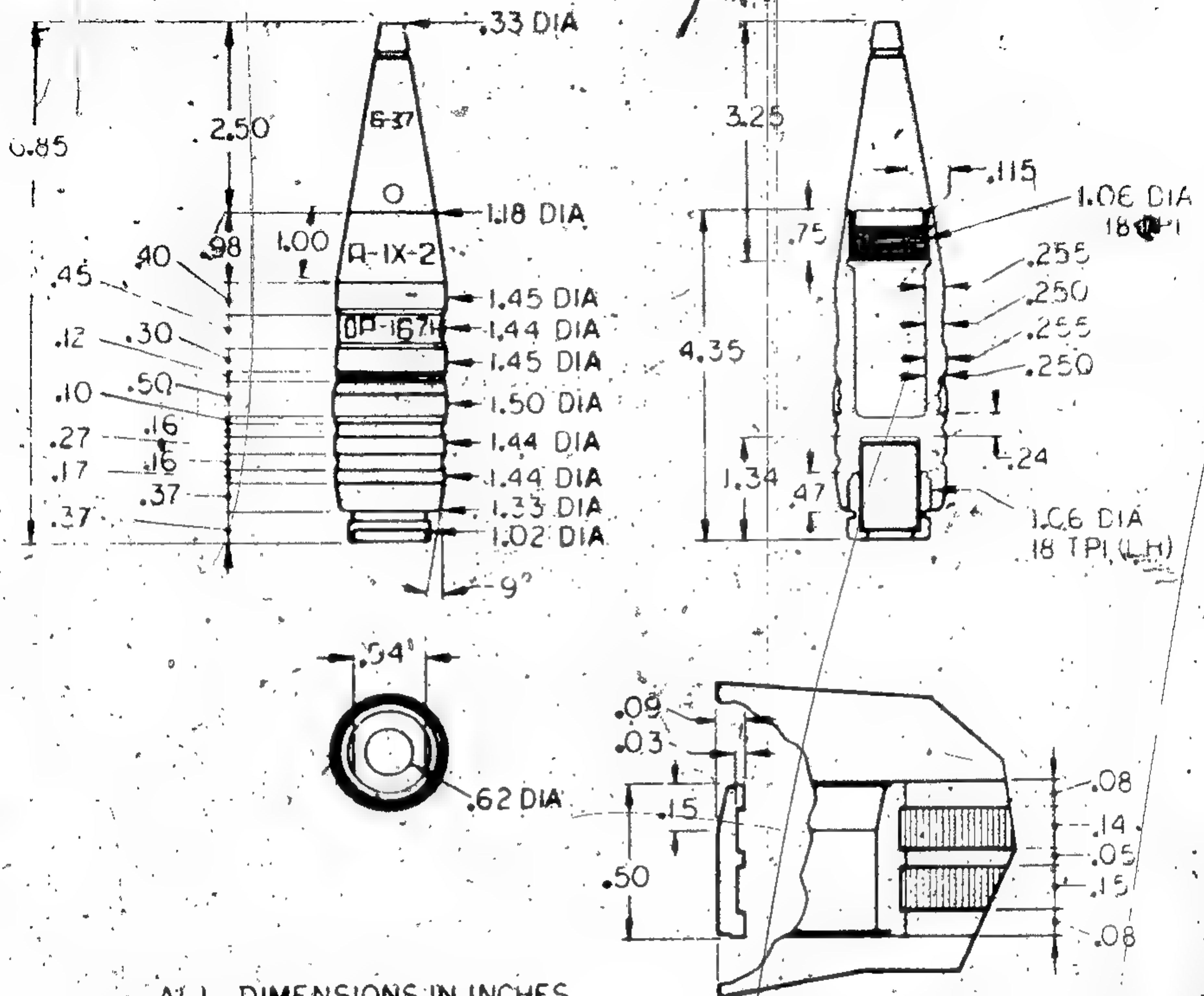
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Original

ST-CW-07-29-74



Caliber ----- 37 mm  
 Identification ----- OR-167N  
 Type ----- Frag-T  
 Weight (fuzed) ----- 1.56 lb  
 Bursting charge ----- 0.08 lb  
 RDX/aluminum/wax

Fuze ----- Model B-37  
 point  
 detonating  
 Known using weapons --- AA Gun MI939  
 and SP AA Gun  
 SU-37  
 Remarks ----- Fuze is identical  
 to MG-37 except  
 for function of  
 rotor lock pin.

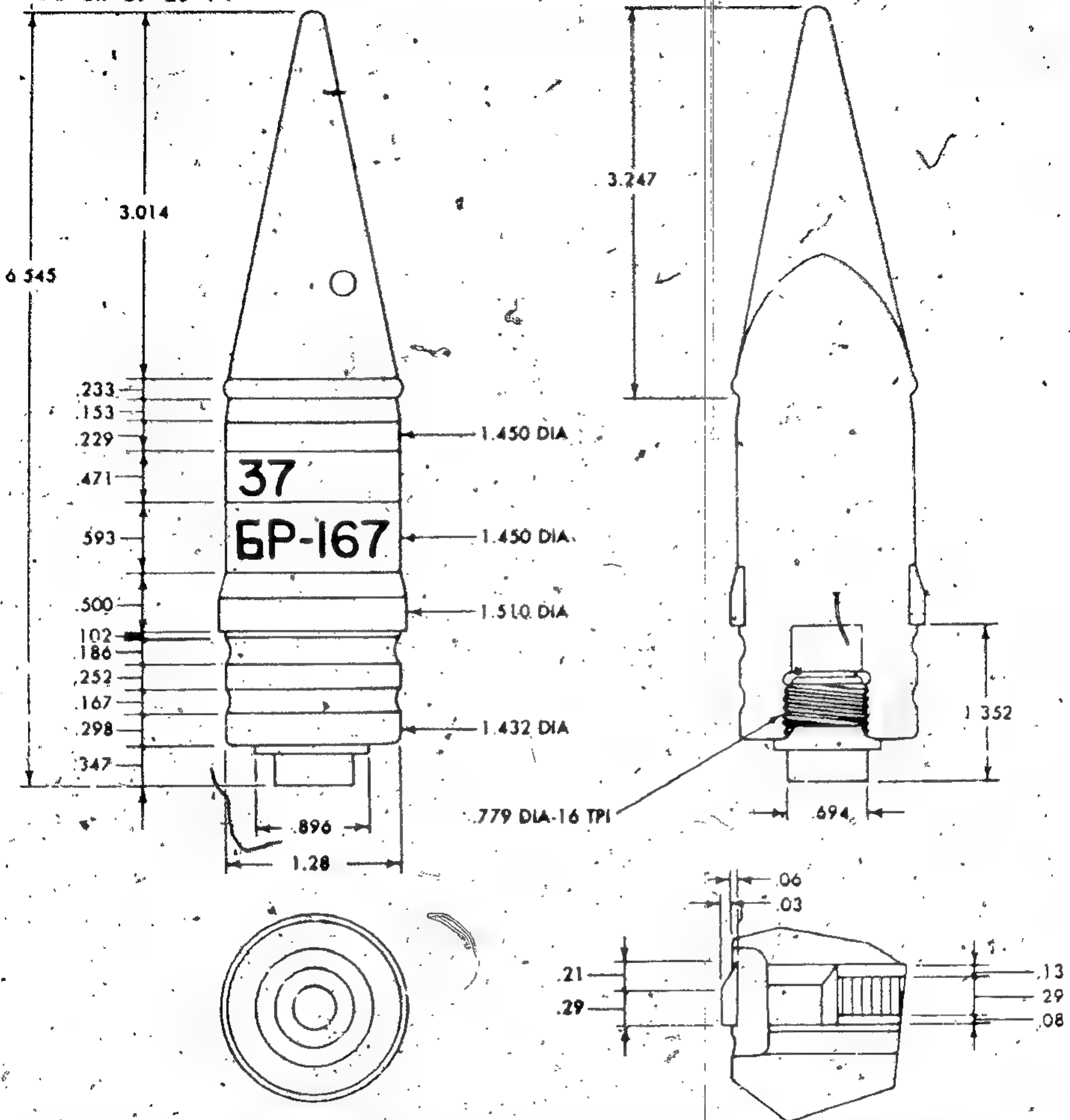
Figure 12a. Soviet 37-mm frag-T projectile Model OR-167N.

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Original



Neg. 502814

ALL DIMENSIONS IN INCHES

Caliber 37 mm  
 Identification BR-167  
 Type AP-T  
 Weight (fuzed) 1.7 lb

Known using  
 weapons

24 INDENTATIONS PER INCH

AA gun M1939 and  
 SP AA Gun SU-37

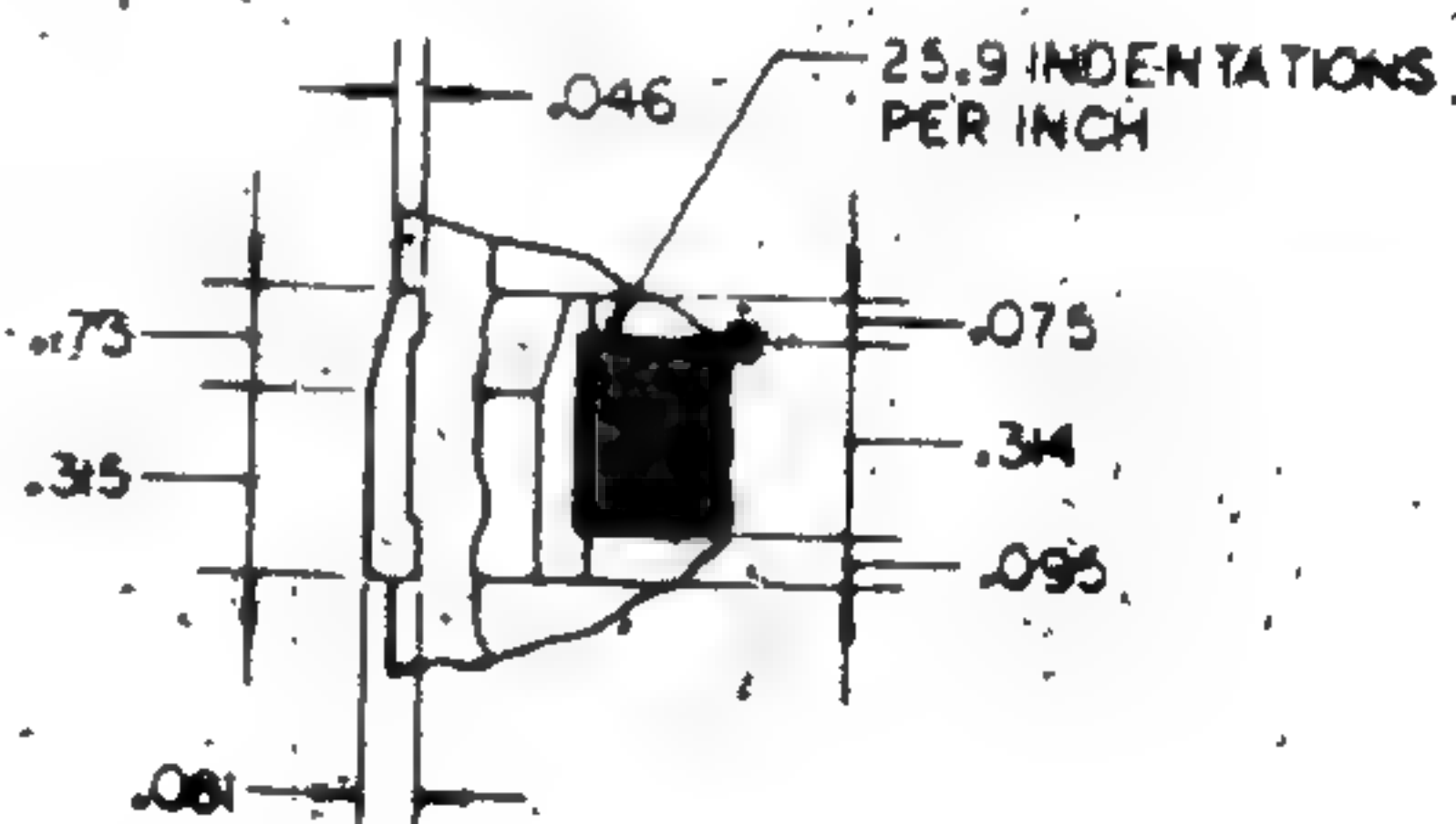
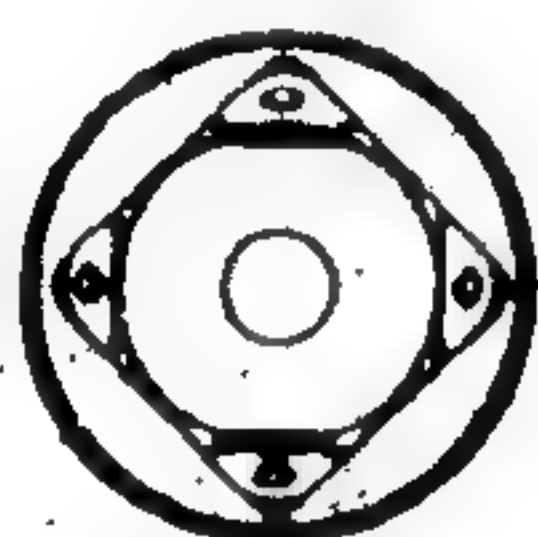
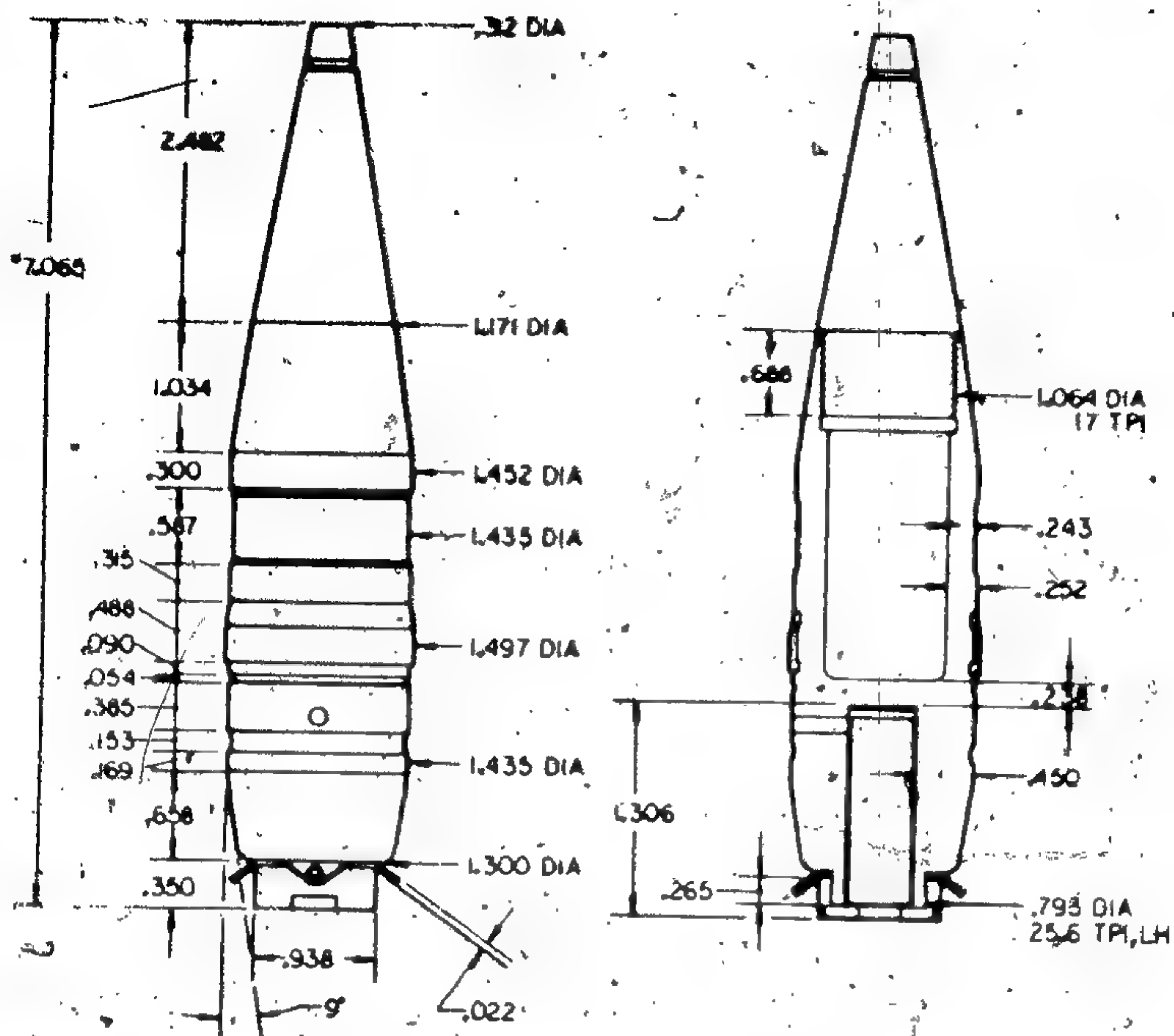
Remarks

This projectile can  
 also be found with  
 two break-off grooves  
 (1.325-in diameter)  
 at bourrelet. The pro-  
 jectile is boattailed.  
 See table II.

Figure 13. Soviet 37-mm AP-T projectile BR-167.

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NEX. 502815

ALL DIMENSIONS IN INCHES

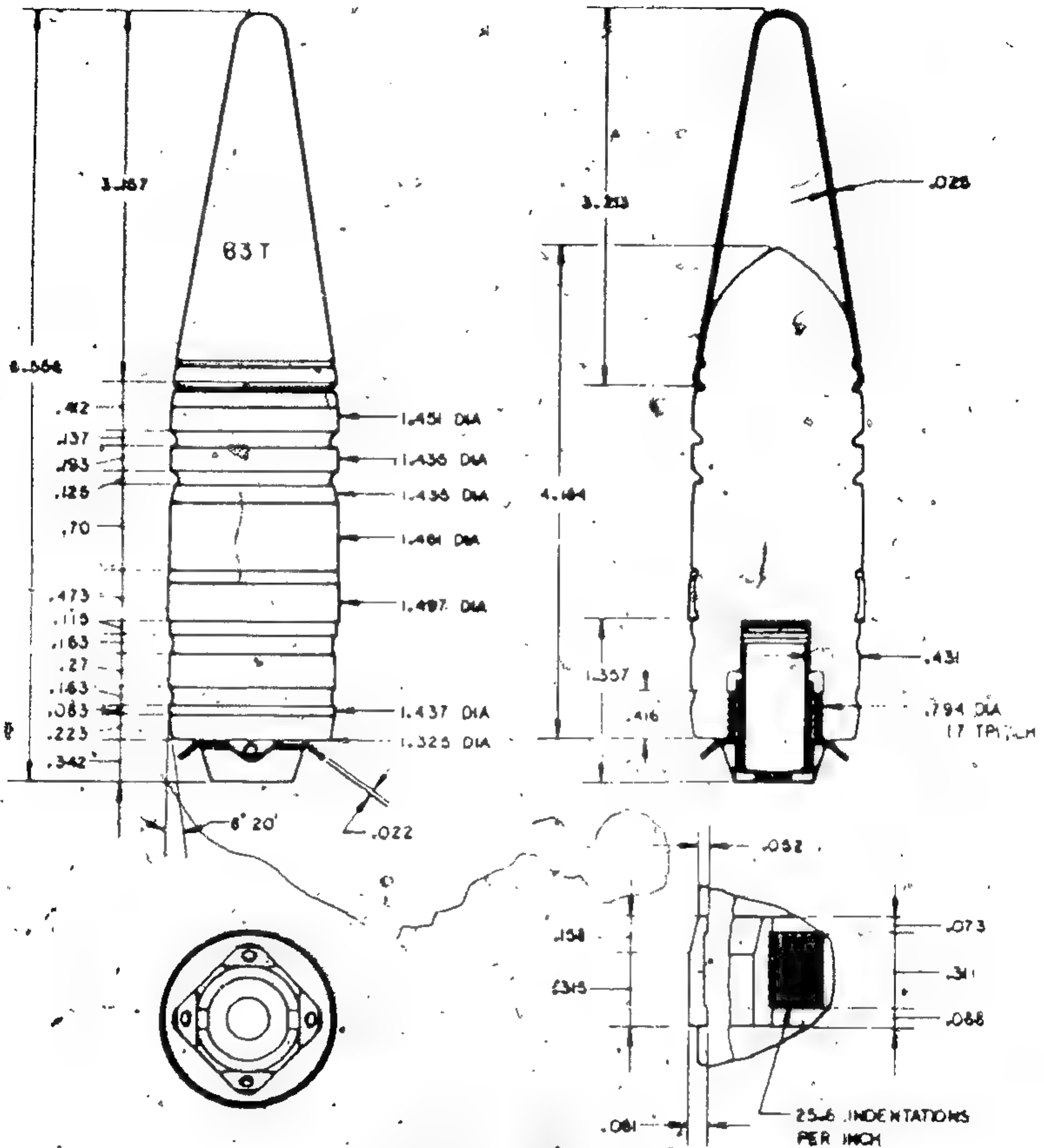
Caliber	37 mm	Fuze	Model A-37U point detonating self-destructing
Identification	OZT		
Type	HEI-T	Known using	
Weight (fuzed)	1.62 lb	weapon	Aircraft cannon Model N
Bursting charge	0.08 lb		
RDX, aluminum			

Figure 14. Soviet 37-mm HEI-T projectile Model OZT.

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Original



Neg: 502816

ALL DIMENSIONS IN INCHES

Caliber \_\_\_\_\_ 37 mm  
 Identification \_\_\_\_\_ BZT  
 Type \_\_\_\_\_ AP-T

Weight (fuzed) \_\_\_\_\_ 1.665 lb  
 Known using \_\_\_\_\_  
 weapon \_\_\_\_\_

Aircraft cannon  
 Model N

Figure 15. Soviet 37-mm AP-T projectile Model BZT.

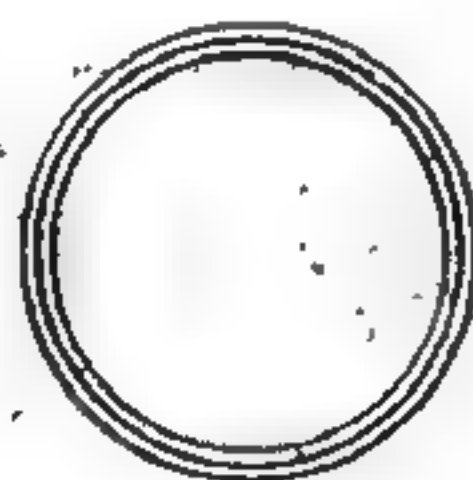
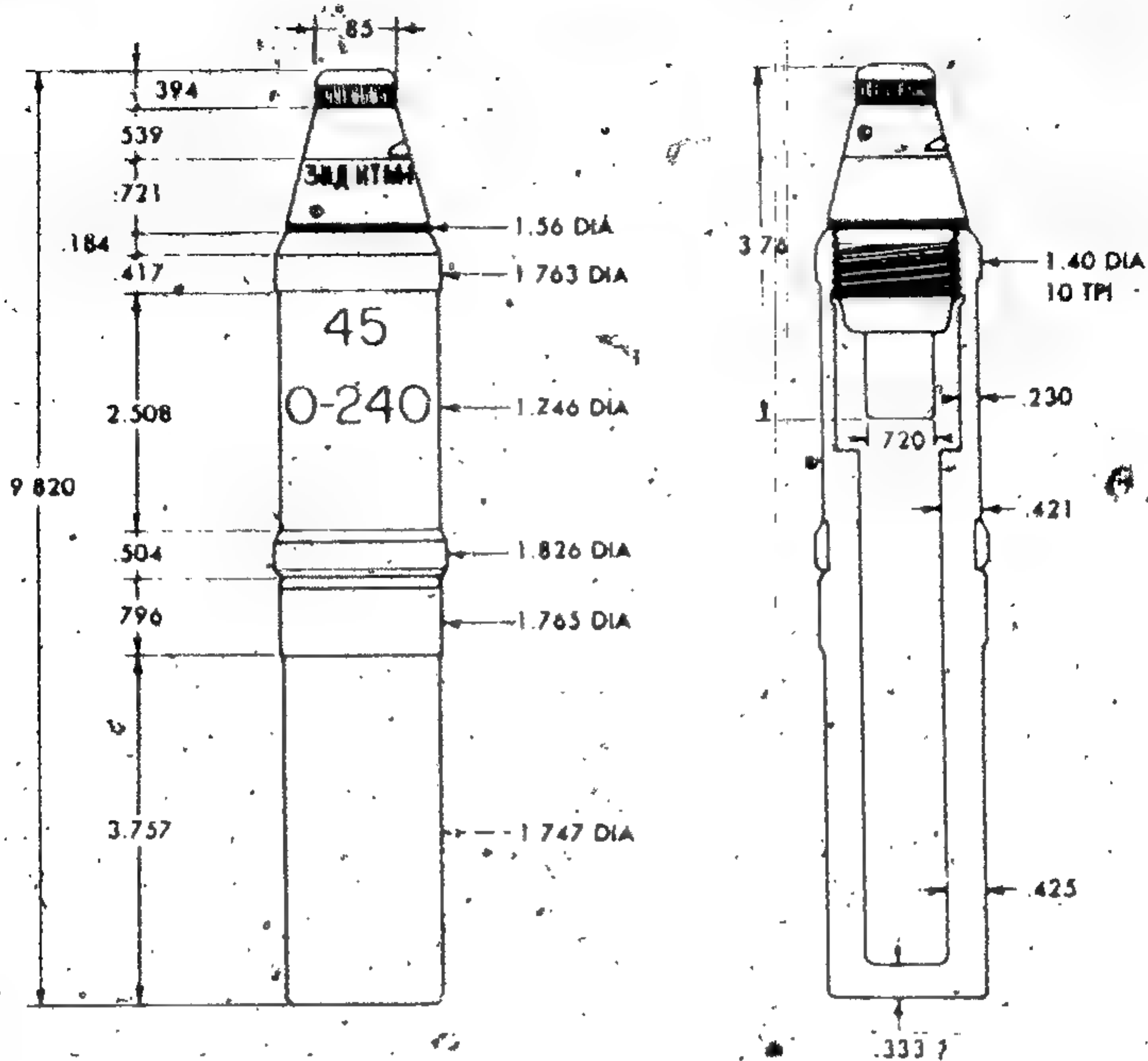
UNCLASSIFIED



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Original

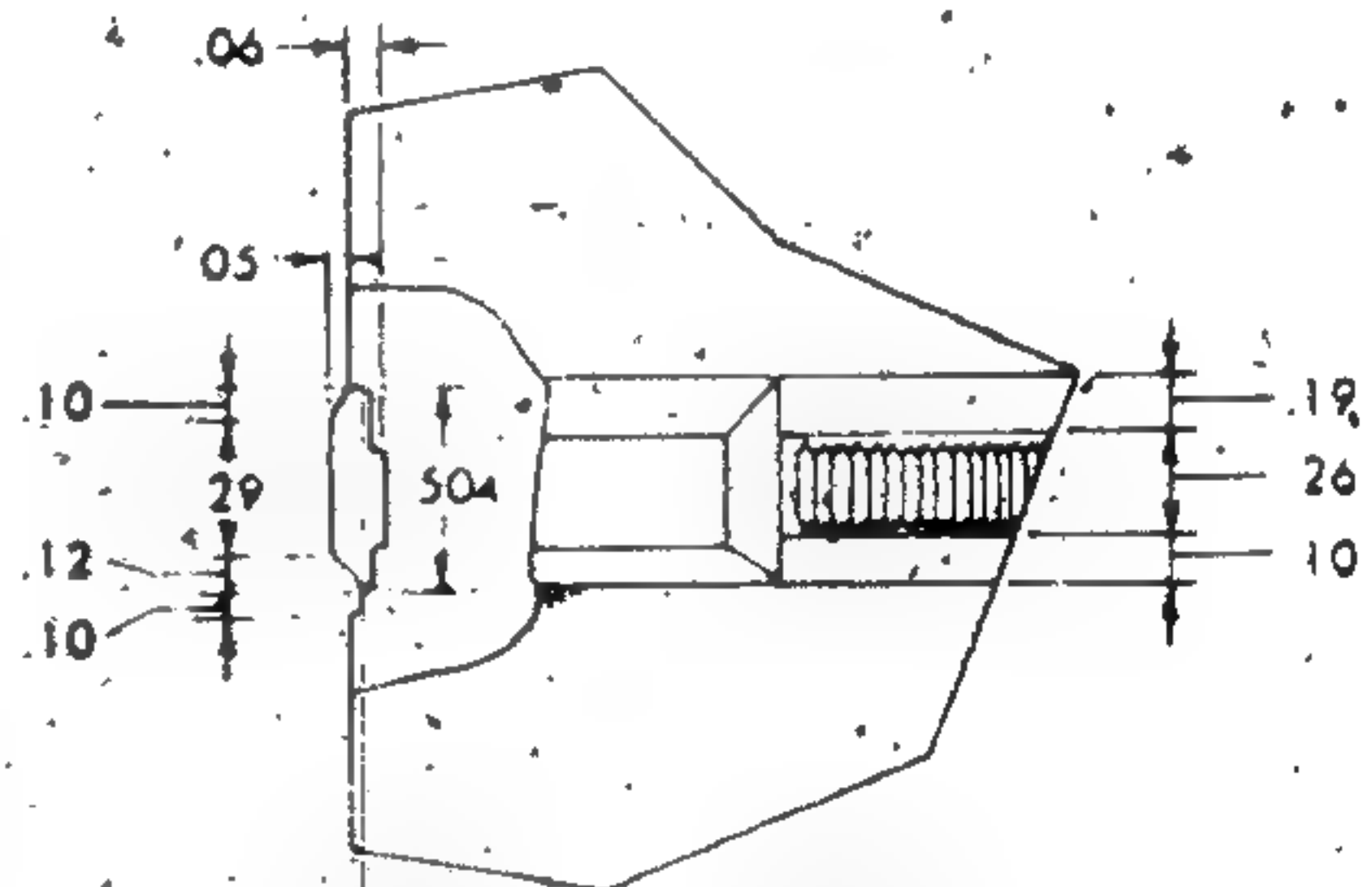
ST-CW-07-29-74



Neg. 502817

1310 002 002 00045 002 00  
A S (CB) 102817

ALL DIMENSIONS IN INCHES



18 INDENTATIONS PER INCH

Caliber	45 mm	Fuze	Model KTM-1 point detonating
Identification	O-240		
Type	Frag	Known using	
Weight (fuzed)	4.64 lb	weapon	AT gun M1942
Burating charge	0.26 lb TNT	Remarks	Also uses Models KT-1 and KTMZ-1 fuzes.

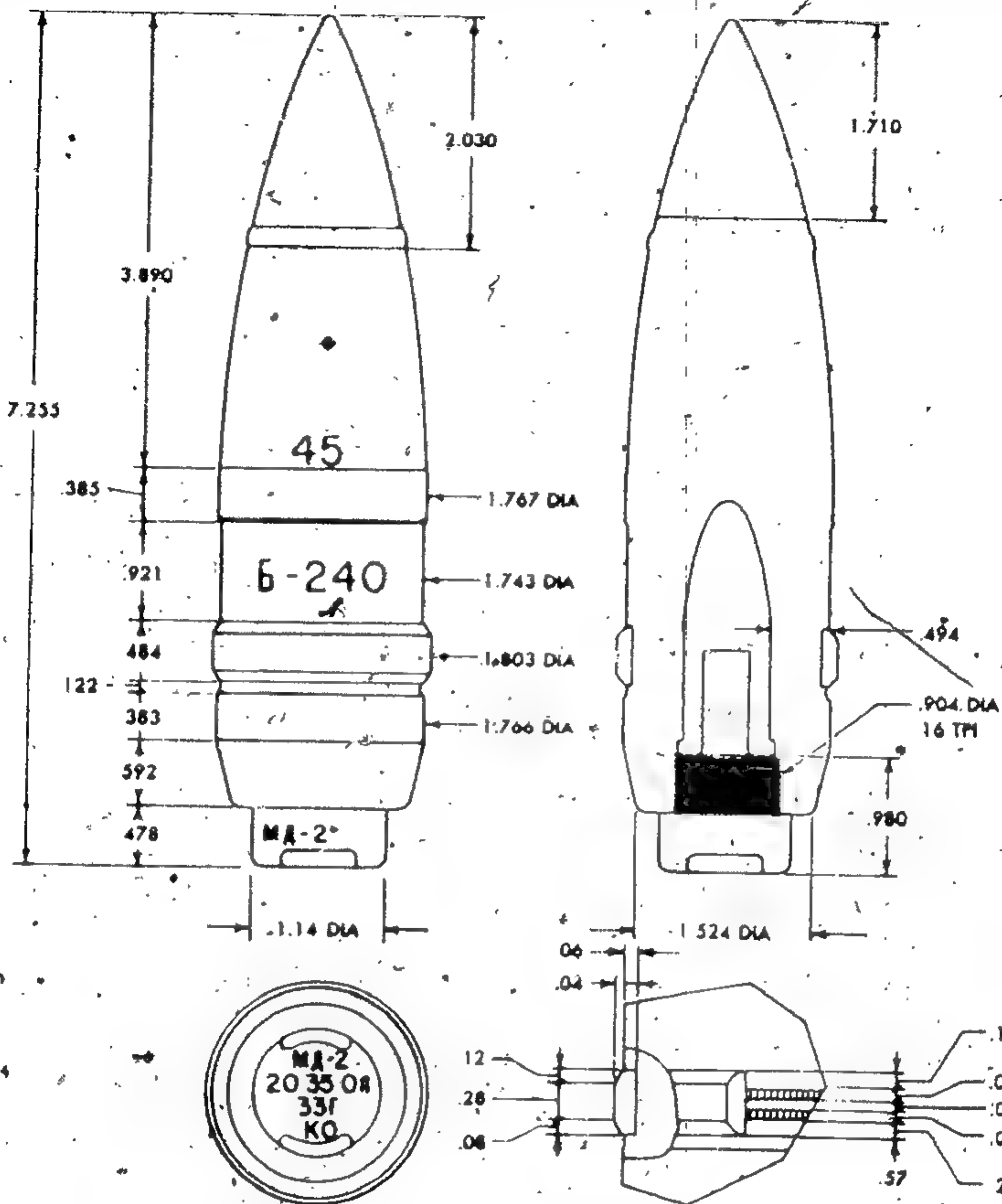
Figure 16. Soviet 45-mm frag projectile Model O-240

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Original



Neg. 502818

ALL DIMENSIONS IN INCHES

20 INDENTATIONS PER INCH

Caliber	45 mm	Fuze	Model MD-2 base detonating
Identification	B-240		
Type	AP	Known using	
Weight (fuzed)	3.15 lb	weapon	AT gun M1942
Bursting charge	0.04 lb TNT/tetryl	Remarks	Also uses Models MD-5 and MD-7 base detonating fuzes.

Figure 17. Soviet 45-mm AP projectile Model B-240.

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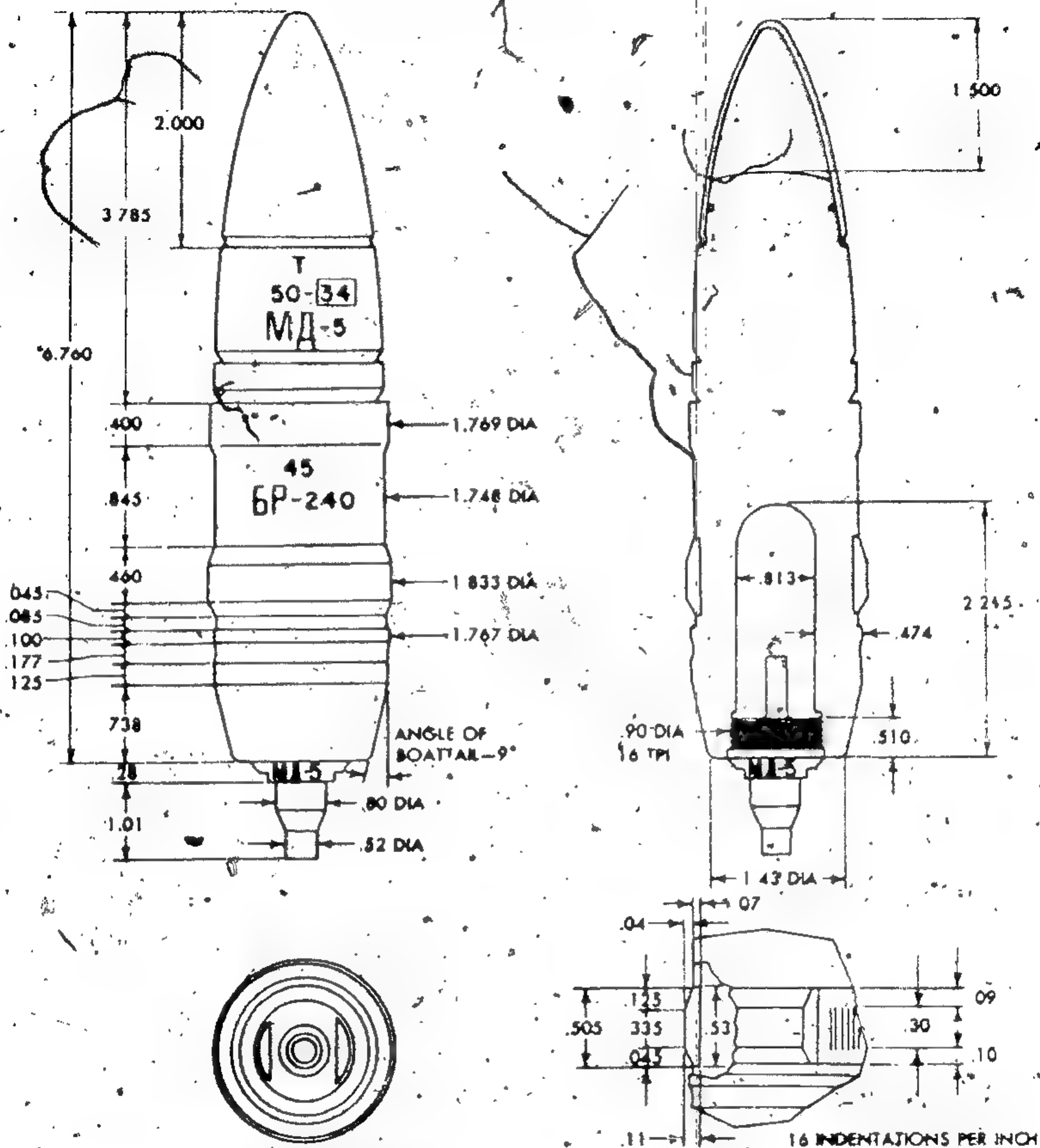


Fig. 502819

ALL DIMENSIONS IN INCHES

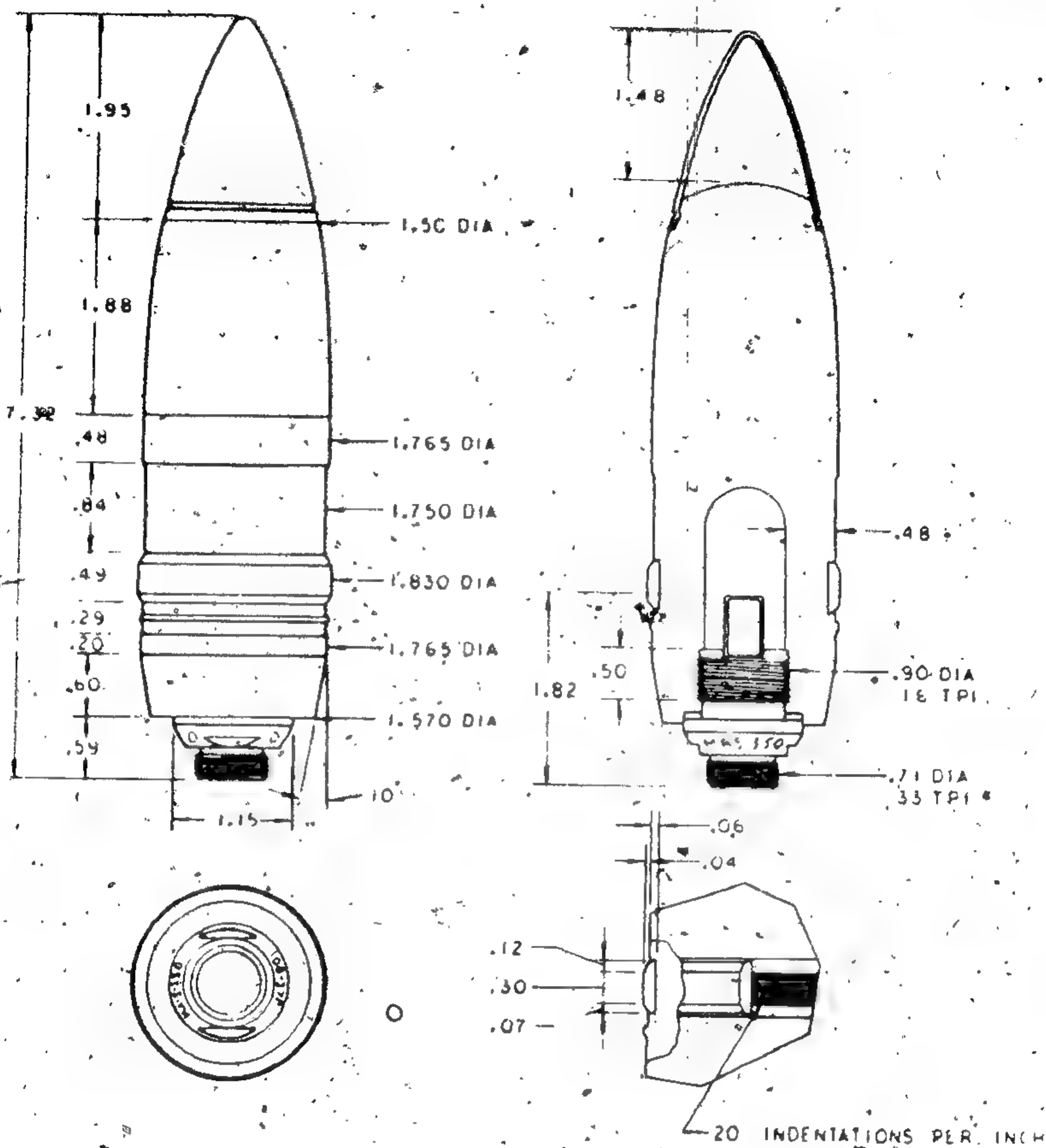
Caliber	45 mm	Bursting charge	0.045 lb TNT
Identification	BR-240	Fuze	Model MD-5 base
Type	AP-T		detonating
Weight (fuzed)	3.15 lb	Known using	
		weapon	AT gun M1942

Figure 18. Soviet 45-mm AP-T projectile Model BR-240.

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Neg. 502820

ALL DIMENSIONS IN INCHES

Caliber	45 mm	Bursting charge	0.06 lb RDX/ aluminum
Identification	BZ-240	Fuze	Model MD-5
Type	API		base detonat- ing
Weight (fuzed)	3.10 lb	Known using weapon	AT gun M1942

Figure 19. Soviet 45-mm API projectile Model BZ-240.

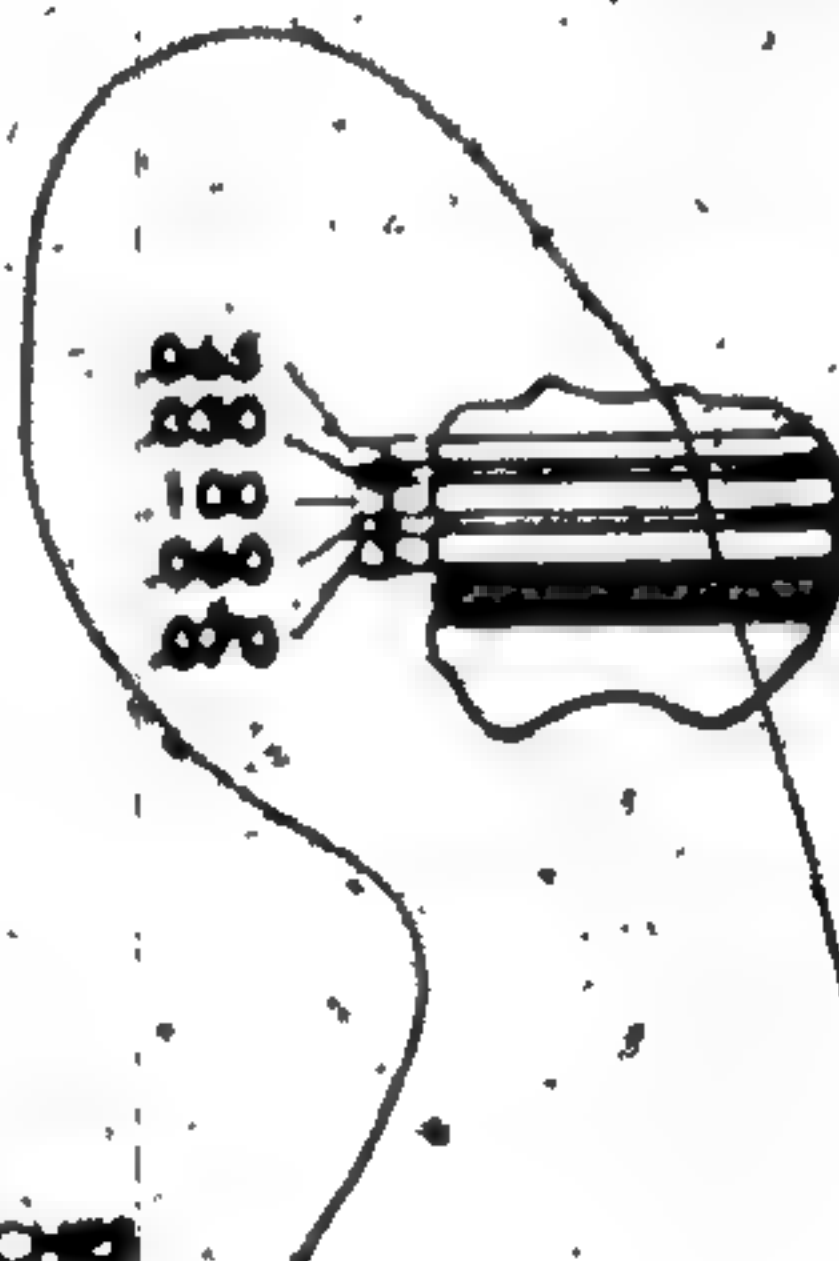
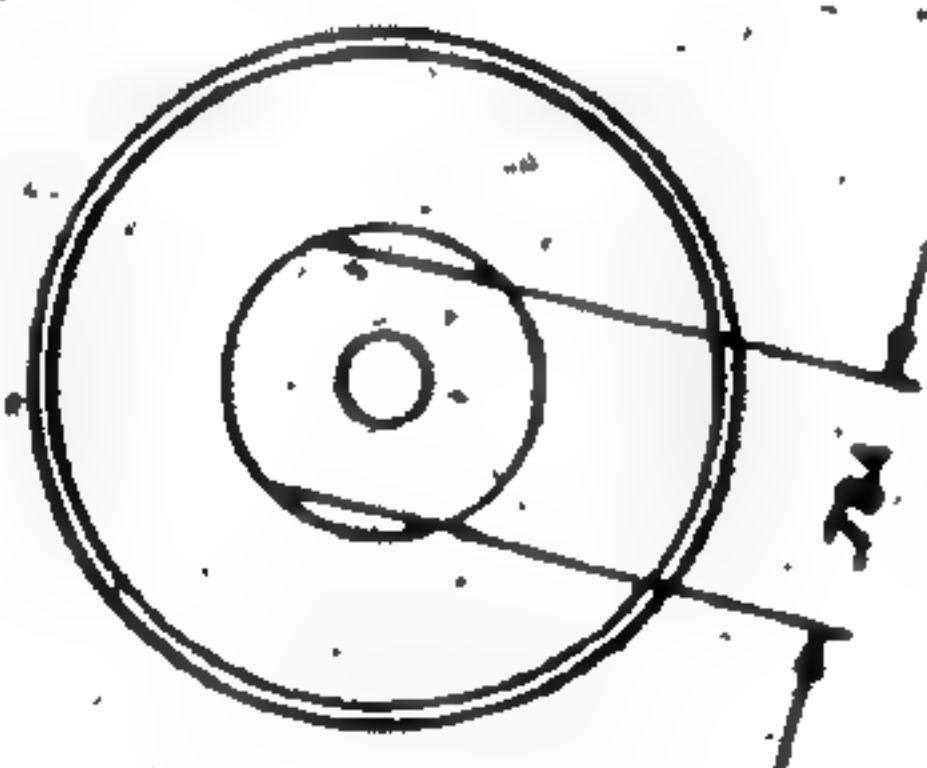
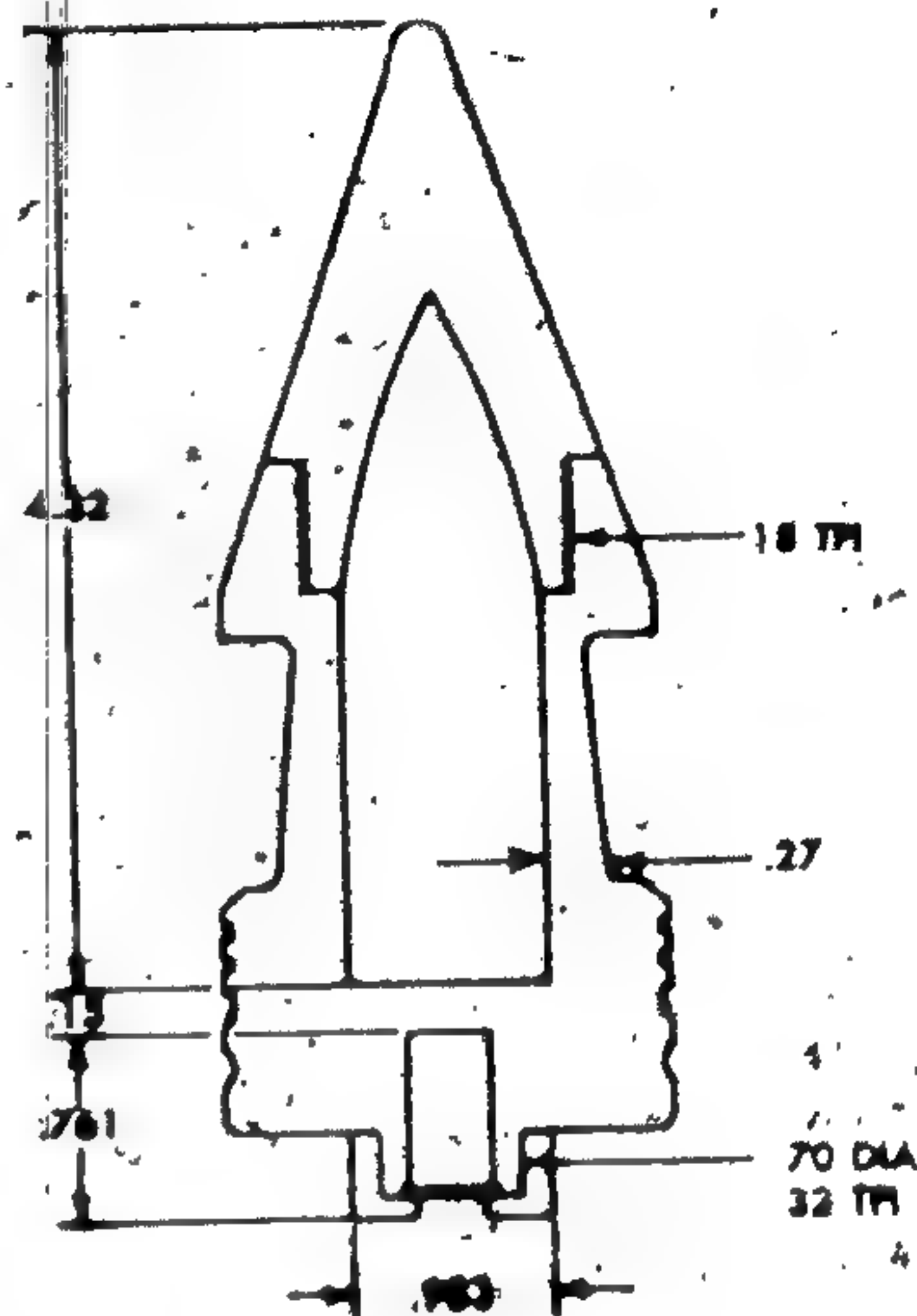
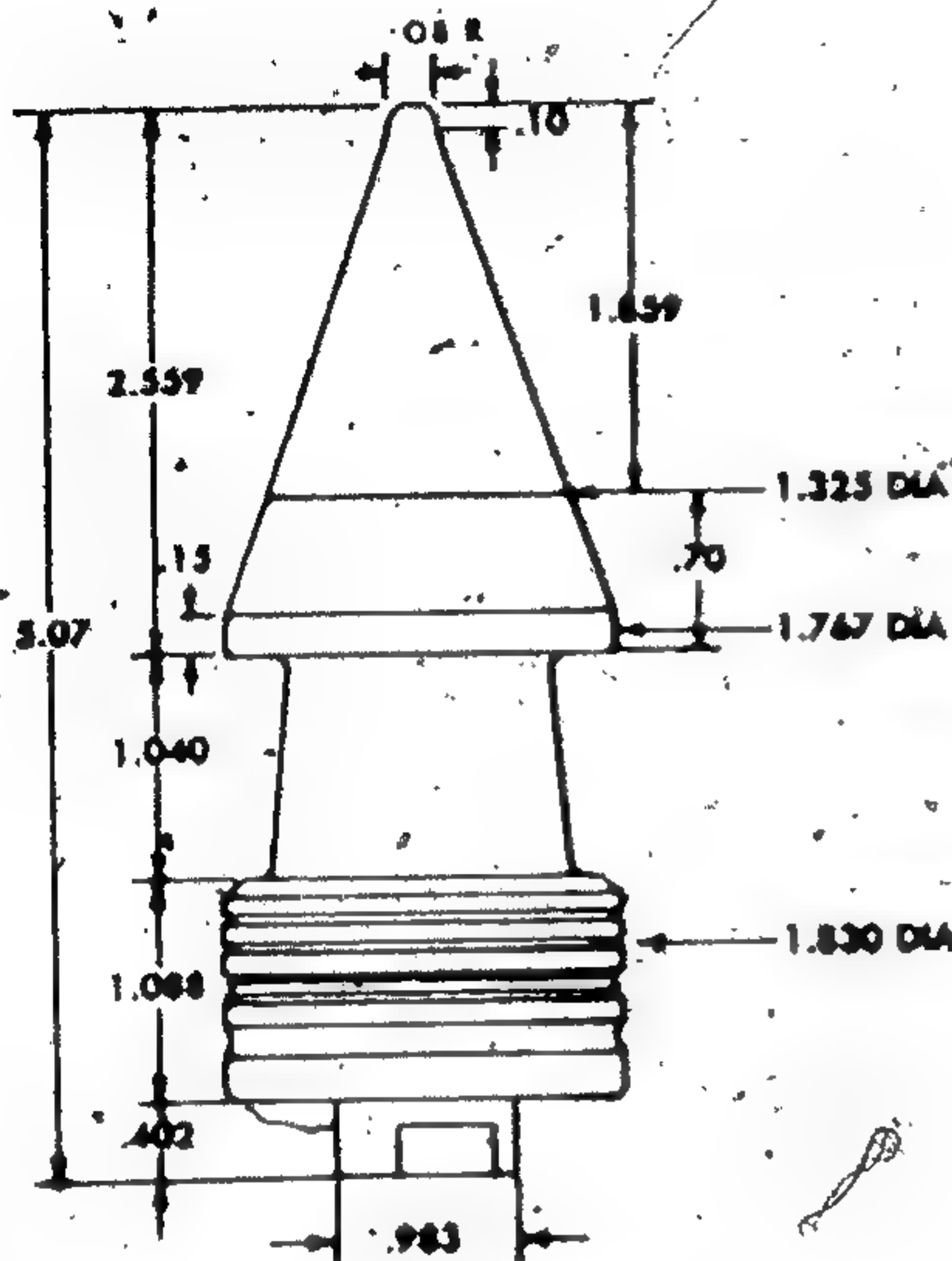
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Original

ST-CW-07-29-74



Neg. 502821

ALL DIMENSIONS IN INCHES

Caliber	45 mm
Identification	BR-240P
Type	HVAP-T
Weight	1.88 lb

Known using  
weapon  
Remarks

AT gun M1942  
Has tungsten  
carbide core  
weighing 0.5  
pound. Rotat  
band is mild  
steel instead  
of copper.

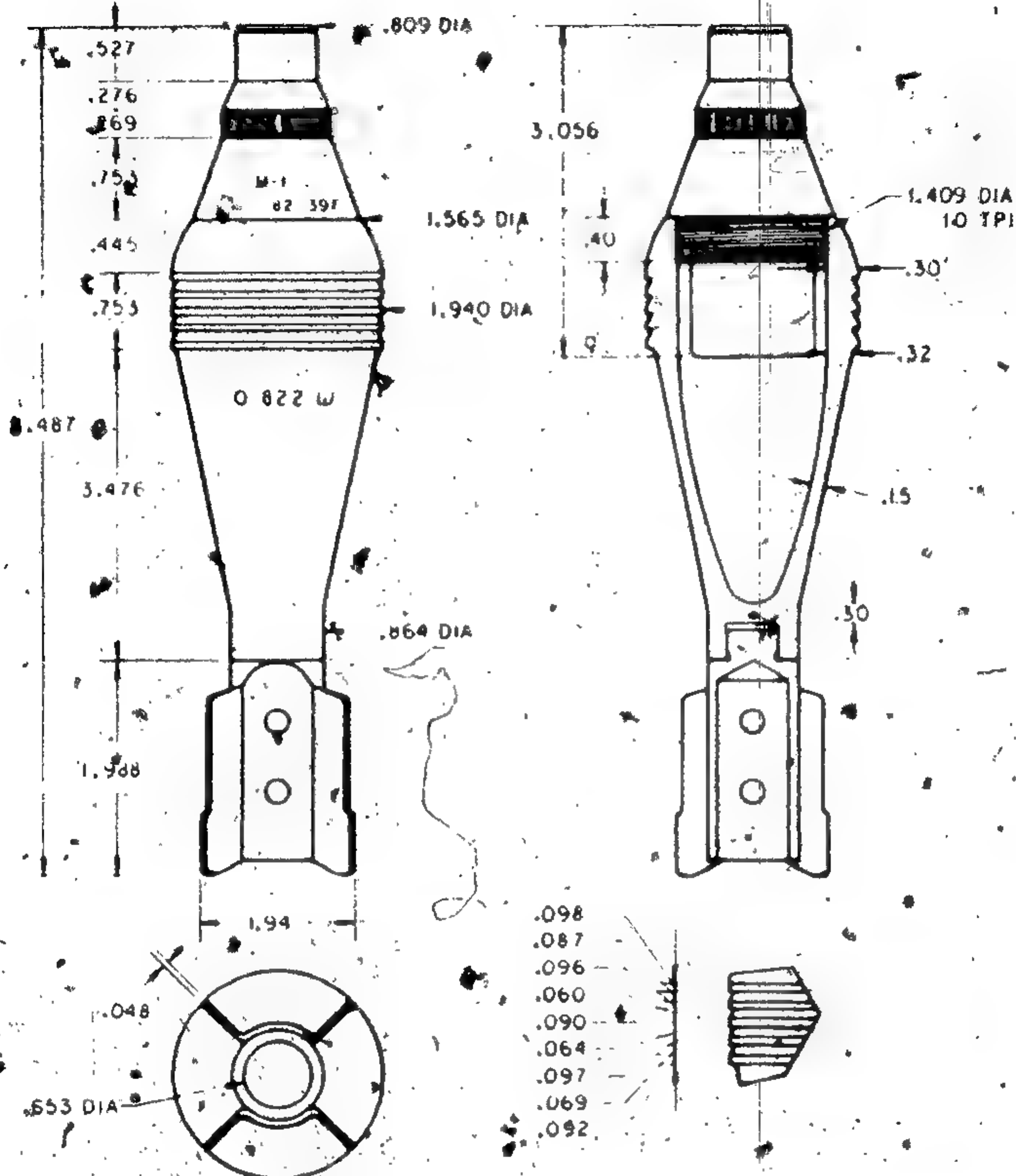
Figure 20. Soviet 45-mm HVAP-T projectile Model BR-240P.

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Original



Neg. 502822

ALL DIMENSIONS IN INCHES

Caliber	50 mm	Bursting charge	0.2 lb TNT
Identification	O-822Sh	Fuze	Model M-1 point detonating
Type	Frag		
Weight (fuzed)	2.18 lb	Known using weapon	Mortar M1940

Figure 21 Soviet 50-mm frag projectile Model O-822Sh.

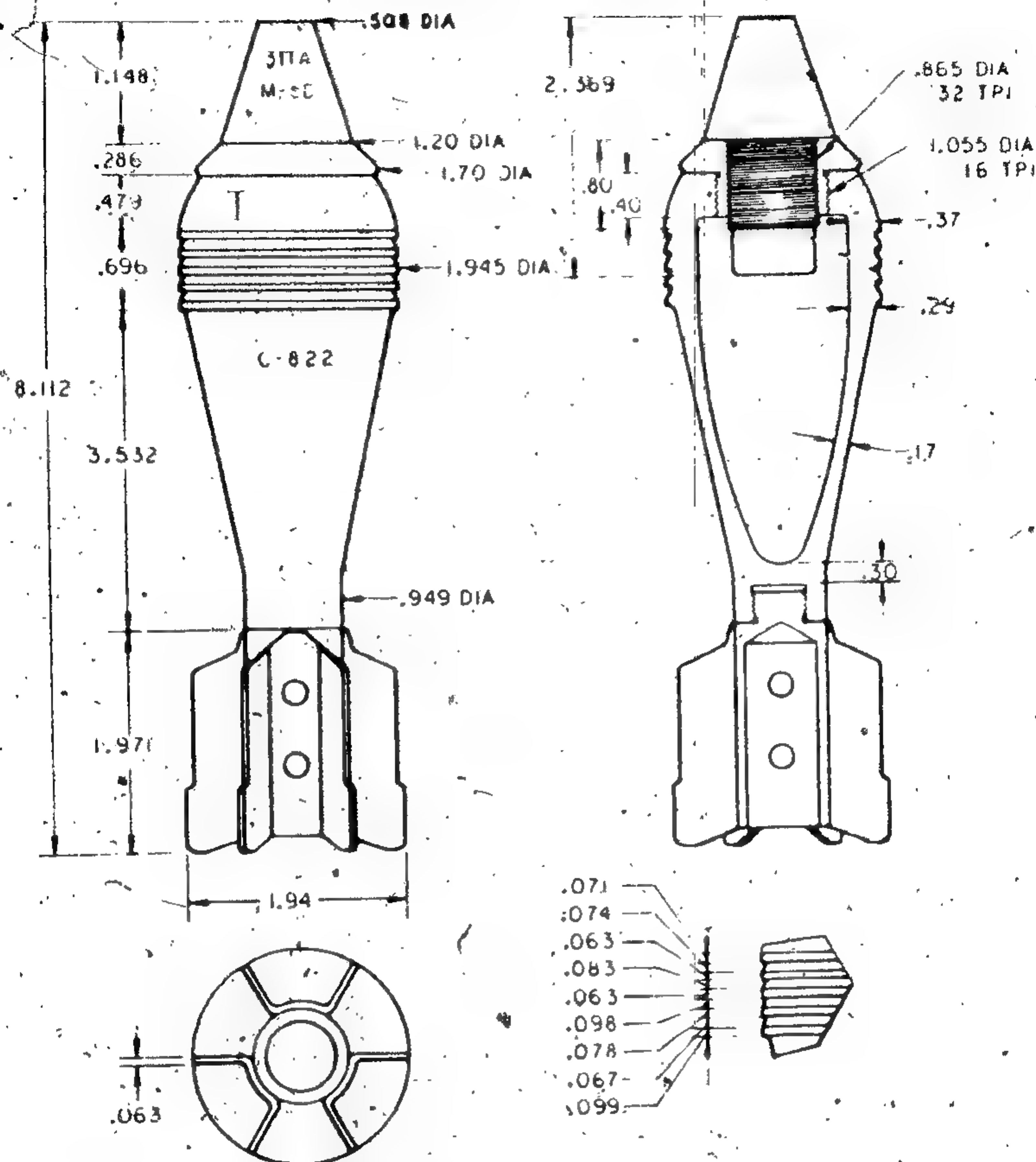
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Original



Neg. 502823

ALL DIMENSIONS IN INCHES

Caliber	50 mm	Bursting charge	0.20 lb TNT
Identification	O-822	Fuze	Model M-50 point detonating
Type	Frag	Known using	
Weight (fuzed)	1.89 lb	weapon	Mortar M1940

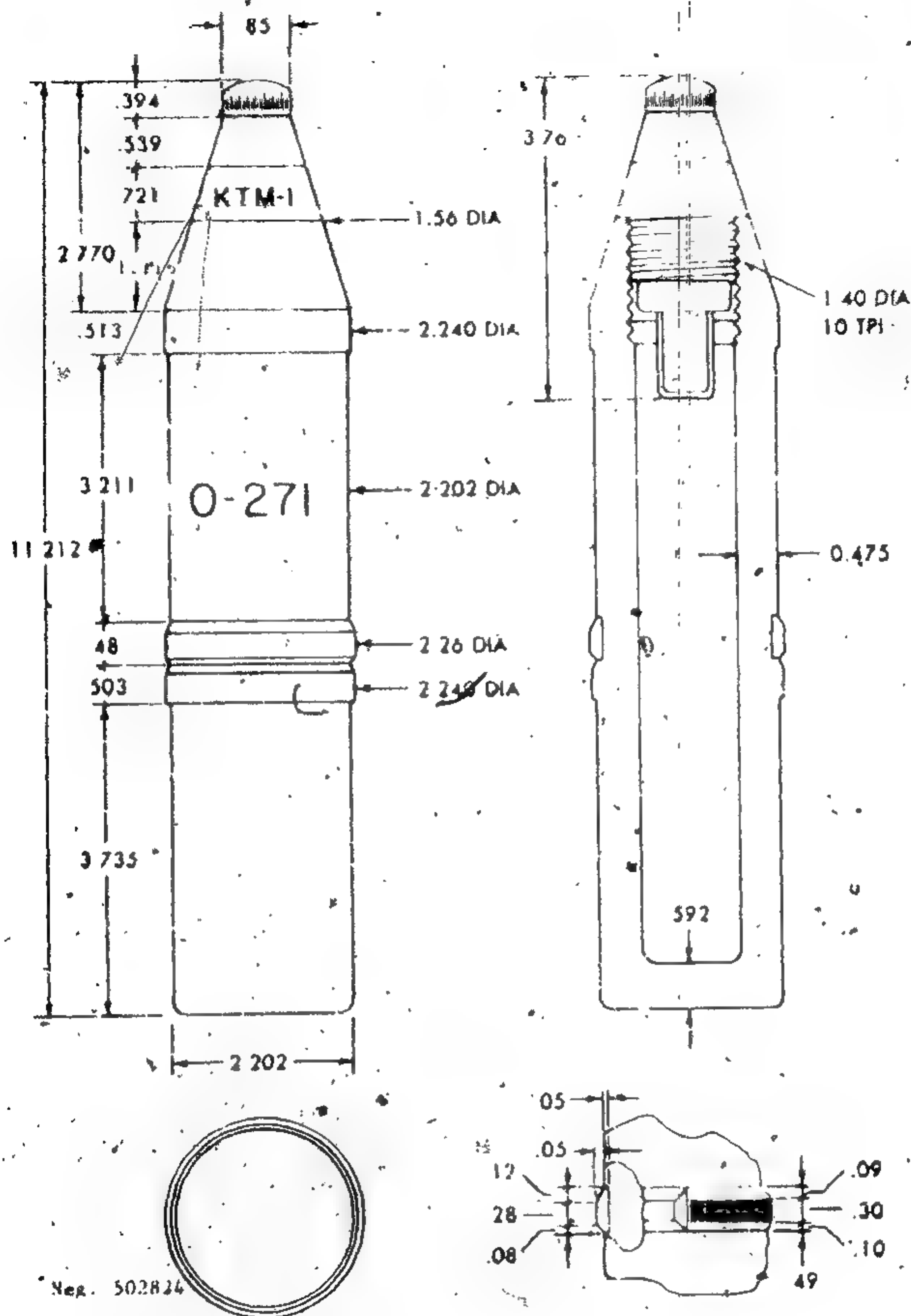
Figure 22. Soviet 50-mm frag projectile Model O-822.

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Original



TJ10 002 002 00057 004 00  
A S (18) 102824

ALL DIMENSIONS IN INCHES

18 INDENTATIONS PER INCH

Caliber \_\_\_\_\_ 57 mm  
Identification \_\_\_\_\_ O-271  
Type \_\_\_\_\_ Frag  
Weight (fuzed) \_\_\_\_\_ 8.11 lb  
Bursting charge \_\_\_\_\_ 0.48 lb  
TNT

Fuze \_\_\_\_\_ Model KTM-1 point  
detonating  
Known using \_\_\_\_\_  
weapons \_\_\_\_\_ AT gun M1943  
(ZIS-2), APAT, and  
ASU-57 guns  
Remarks \_\_\_\_\_ Also uses Model KT-1  
point detonating  
fuze.

Figure 23. Soviet 57-mm frag projectile Model O-271.

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ST-CW-07-29-74



18 INDENTATIONS PER INCH

Known using  
weapons ---

At gun M1943  
(ZIS-2), APAT,  
and ASU-57 guns  
This projectile  
is the same as  
the O-271, except  
that it has two  
rotating bands;  
the O-271 has one.

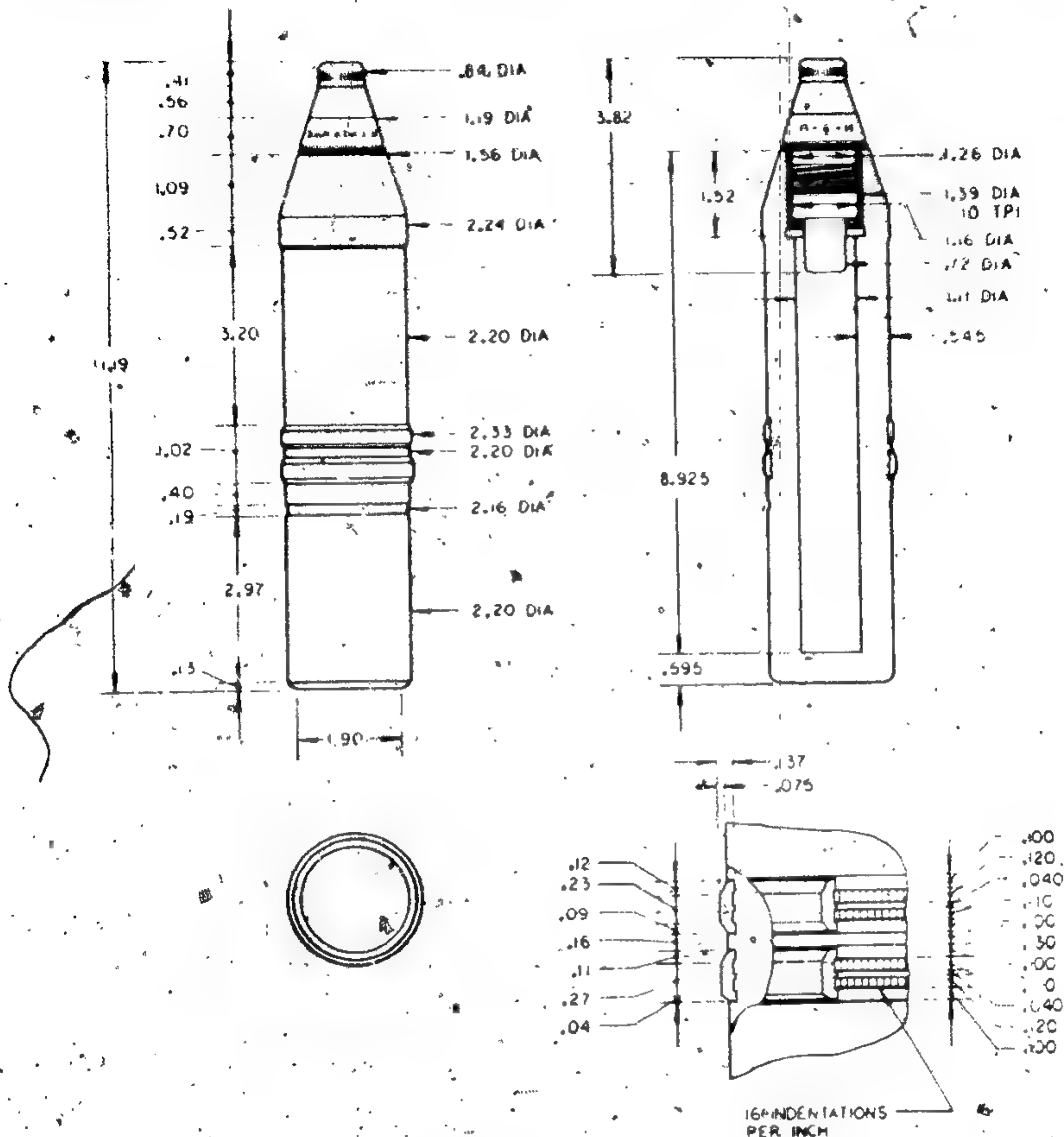
Figure 24. Soviet 57-mm frag projectile Model O-271U.

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Original



Neg. 502826

ALL DIMENSIONS IN INCHES

Caliber ----- 57 mm  
 Identification ----- O-271U  
 Type ----- Frag  
 Weight (fuzed) ----- 8.14 lb  
 Bursting charge ----- 0.47 lb  
 RDX/aluminum  
 Fuze ----- Model KTM-  
 1-U point  
 detonating

Known, using  
 weapons -----

AT Gun M1943  
 (ZIS-2), APAT, and  
 ASU-57 guns

Remarks -----

Projectile is  
 basically the same  
 as the O-271U (fig  
 24) except for the  
 fuze, explosive  
 charge, and a few  
 dimensional changes.

Figure 25. Soviet 57-mm frag projectile Model O-271U (variant).

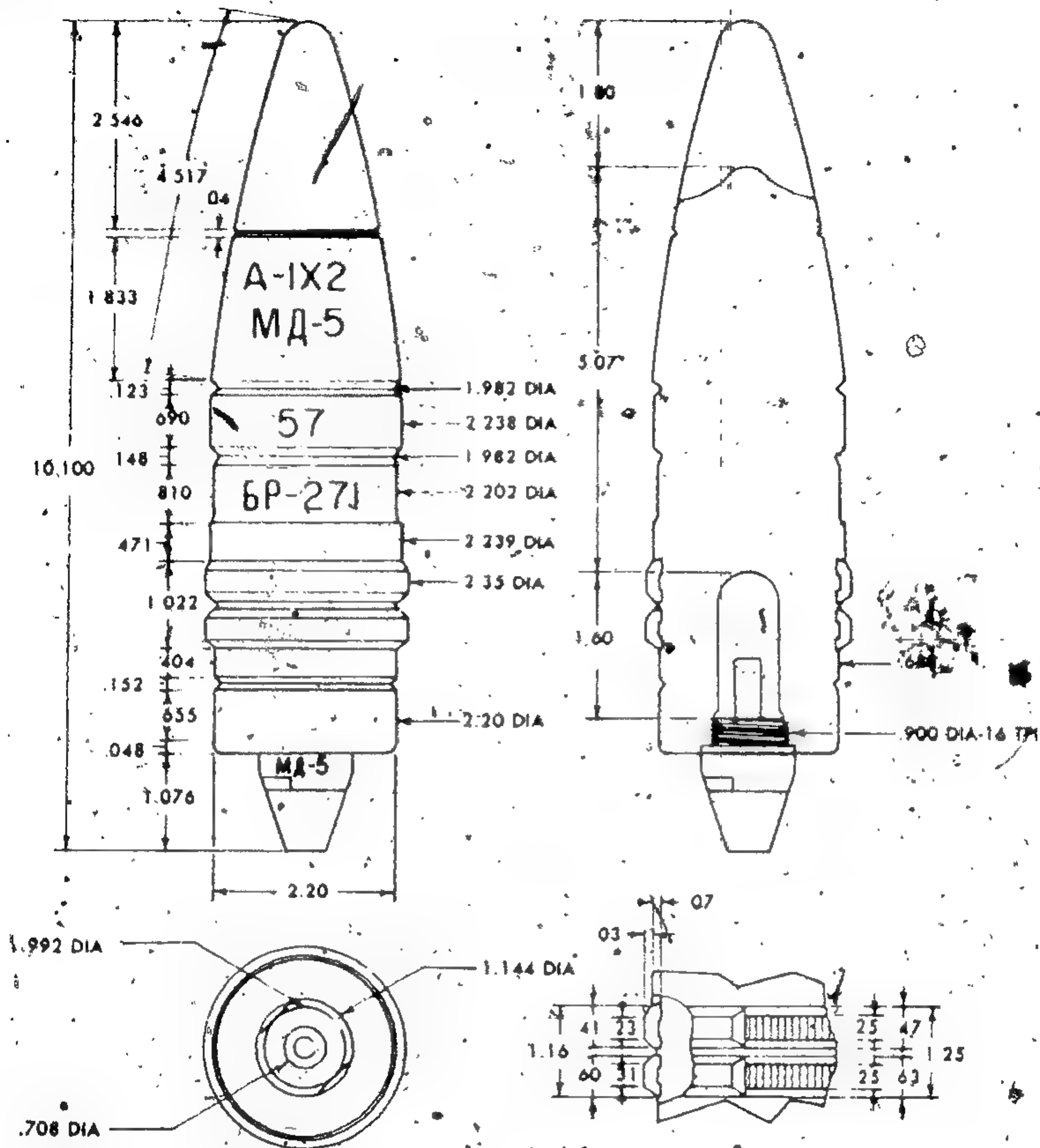
UNCLASSIFIED



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Original

ST-CW-07-29-74



Neg. 502827 ALL DIMENSIONS IN INCHES

18 INDENTATIONS PER INCH

Caliber	57 mm
Identification	BR-271
Type	AP-T
Weight (fuzed)	6.92 lb
Bursting charge	0.084 lb
	RDX/aluminum
Fuze	Model MD-5
	base detonating
Known using weapons	AT gun M1943 (ZIS-2), APAT, and ASU-57 guns

Remarks — The significance of the red color band on the projectile is unknown. Although a red band normally designates an incendiary filler, the stenciled code and filler markings on illustrated projectile indicate that it is an AP-T found with an HE filler, rather than an API-T type.

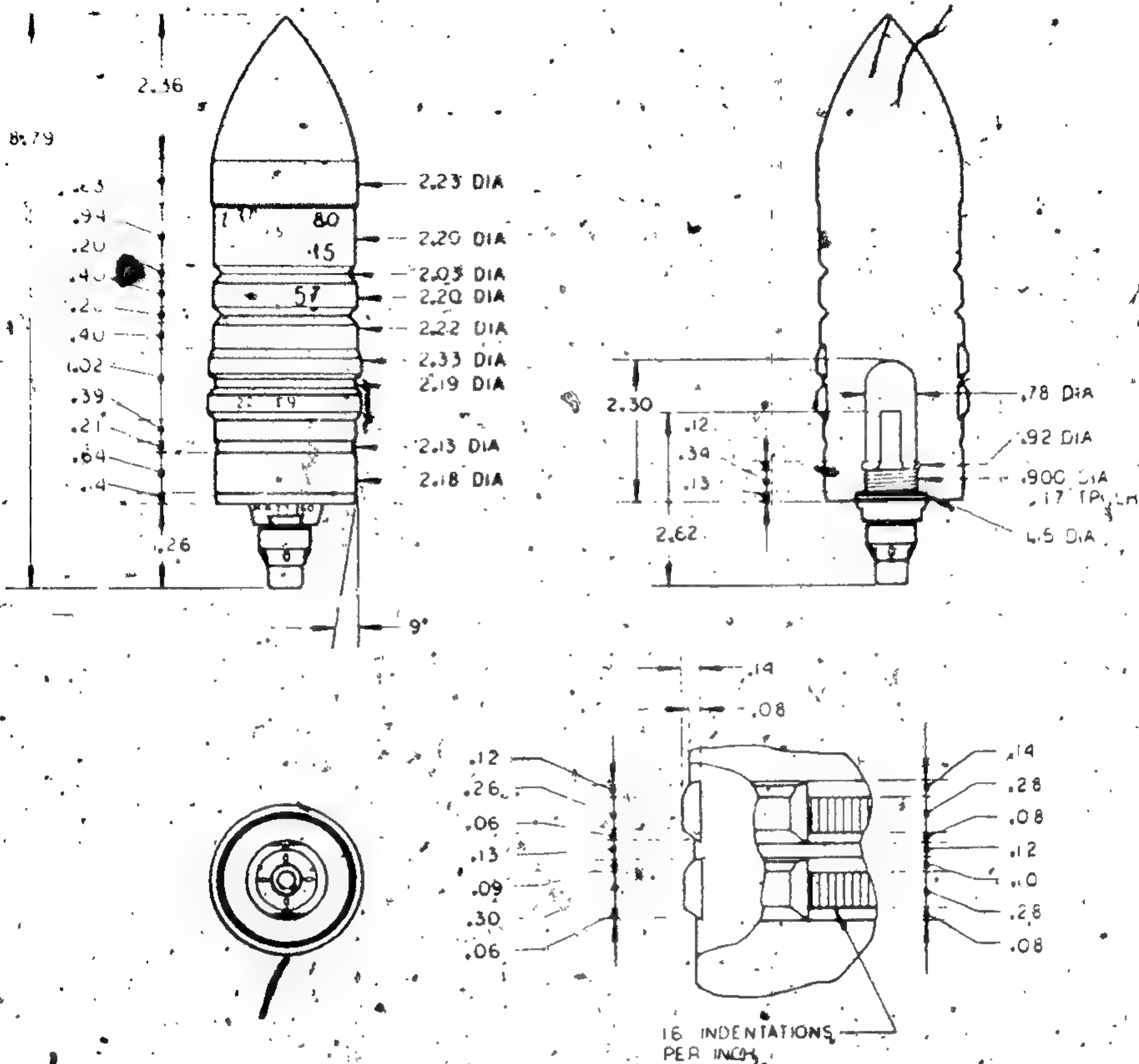
Figure 26. Soviet 57-mm AP-T projectile Model BR-271.

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Original



Neg. 502828

ALL DIMENSIONS IN INCHES

Caliber ----- 57 mm

Identification ---- BR-271K

Type ----- AP-T

Weight (fuzed) +---- 6.90 lb

Bursting charge --- 0.041 lb  
RDX/Aluminum

Fuze -----

Known using  
weapons

Remarks -----

Model MD-7, base  
detonating

AT gun M1943  
(ZIS-2), APAT, and  
ASU-57 guns

Also uses Model MD-10  
base detonating fuze.

Figure 27. Soviet 57-mm AP-T projectile Model BR-271K.

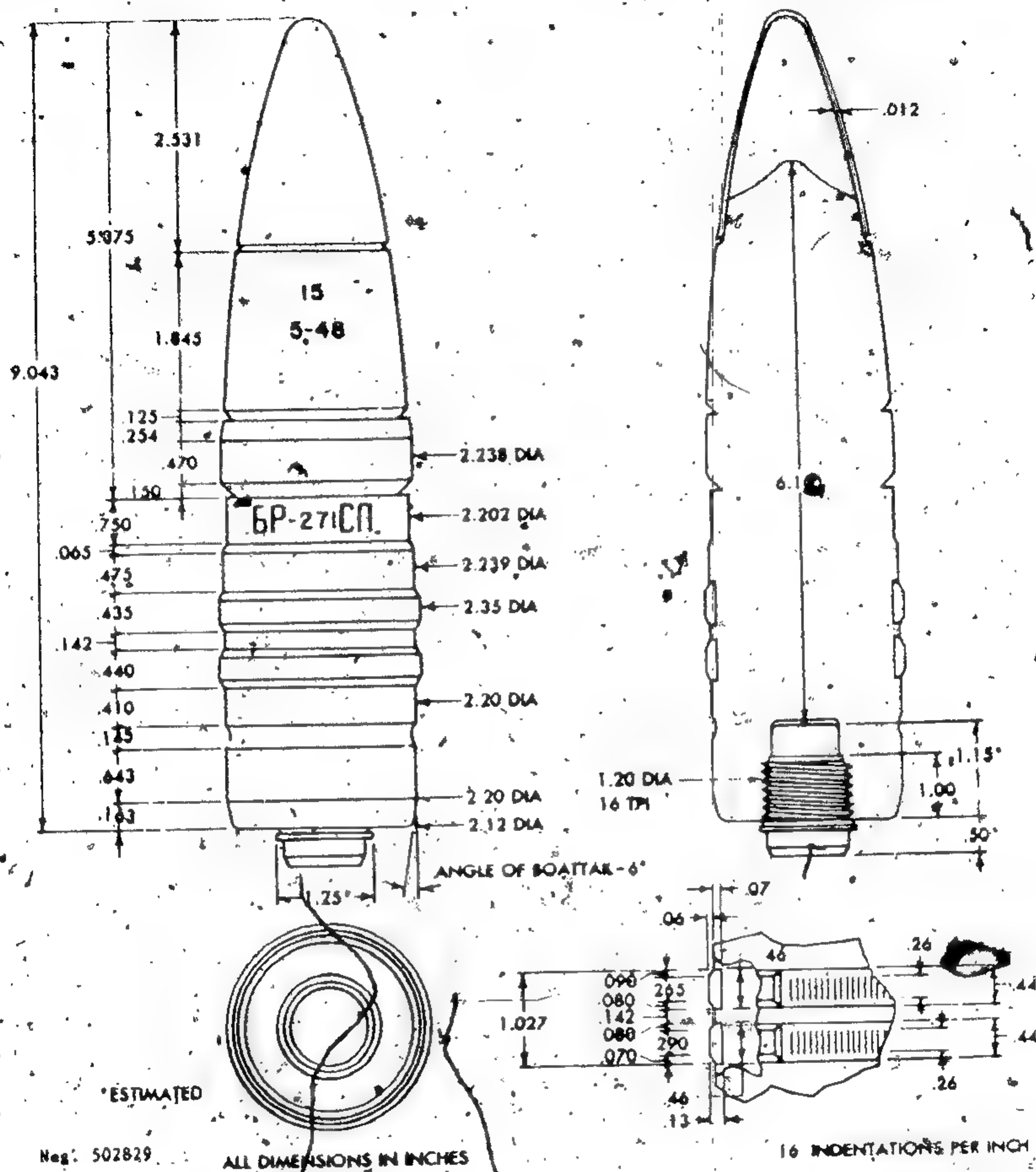
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Original

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Caliber — 57 mm  
 Identification — BR-271SP  
 Type — AP-T  
 Weight — 6.92 lb.

Bursting charge — Solid shot  
 Known using weapons — AT gun M1943 (ZIS-3), APAT, and ASU-57 guns

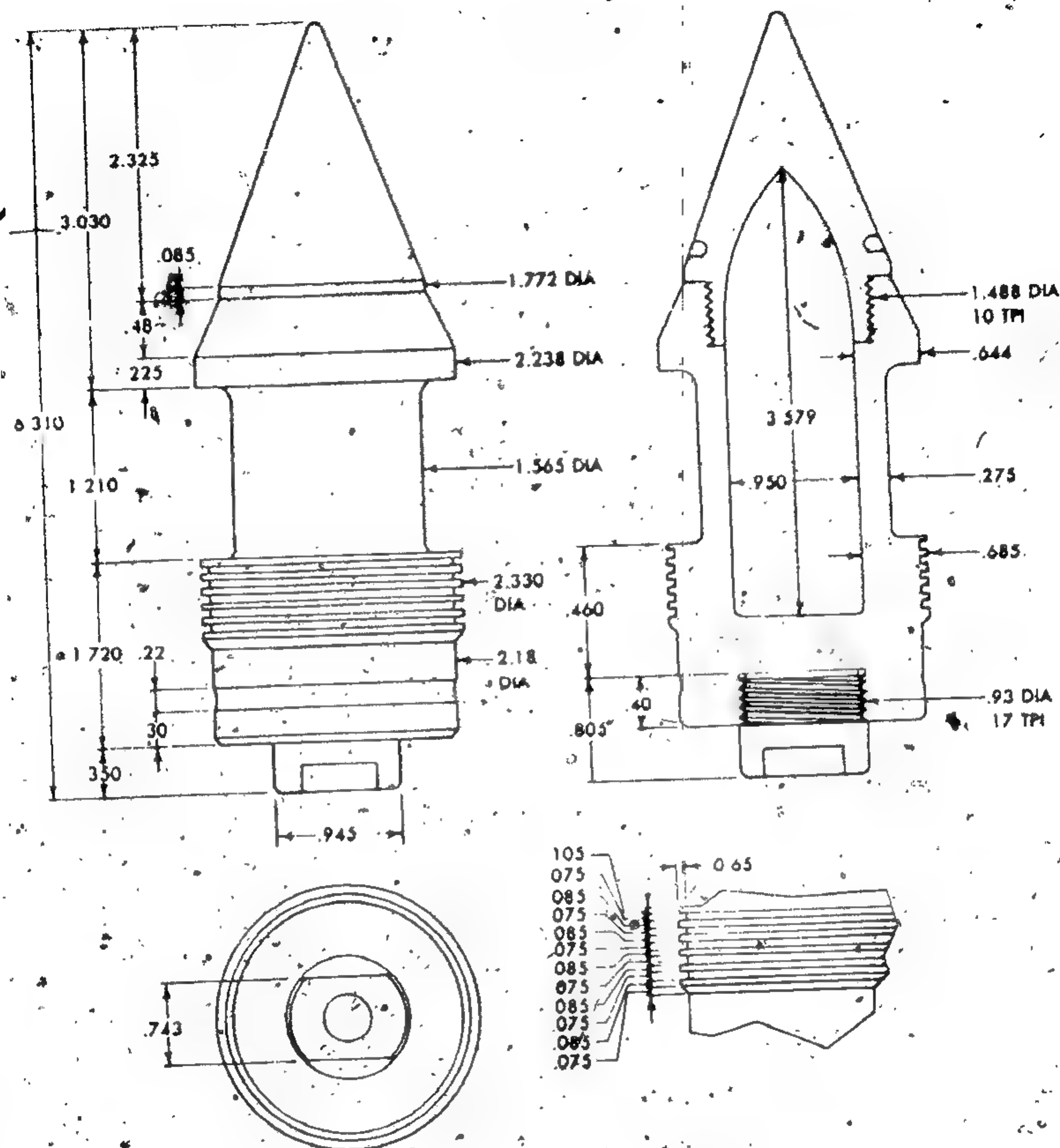
Figure 28. Soviet 57-mm AP-T projectile Model BR-271SP.

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Original



Caliber ----- 57 mm  
 Identification ----- BR-271P  
 Type ----- HVAP-T  
 Weight ----- 3.87 lb

Known using weapons ----- AT gun M1943  
 (ZIS-2), APAT,  
 and ASU-57 guns  
 Remarks ----- Weight of core  
 1.124 lb

Figure 29. Soviet 57-mm HVAP-T projectile Model BR-271P.

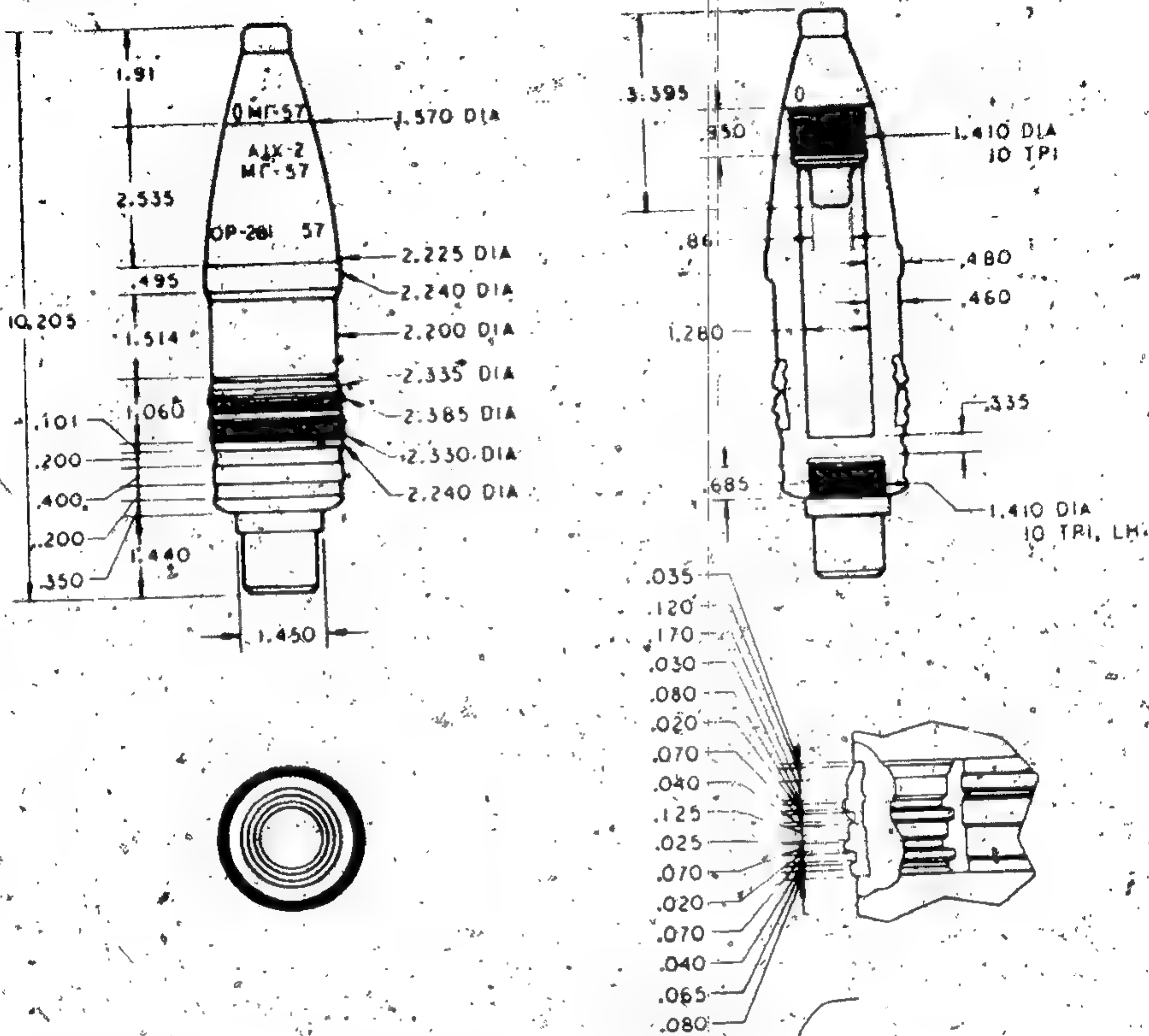
UNCLASSIFIED



UNCLASSIFIED

ST-CW-07-29-74

Original



Neg. 502831

ALL DIMENSIONS IN INCHES

Caliber ----- 57 mm  
 Identification ----- OR-281  
 Type ----- Frag-T  
 Weight (fuzed) ----- 6.18 lb  
 Bursting charge ----- 0.37 lb  
 RDX/aluminum

Fuze ----- Model MG-57 PDSD  
 Known using -----  
 weapons ----- AA Gun 6-60 and  
 SP. AA Gun ZSU-57-2  
 Remarks ----- Also uses Model MG-57  
 point detonating self  
 destroying fuze (del)

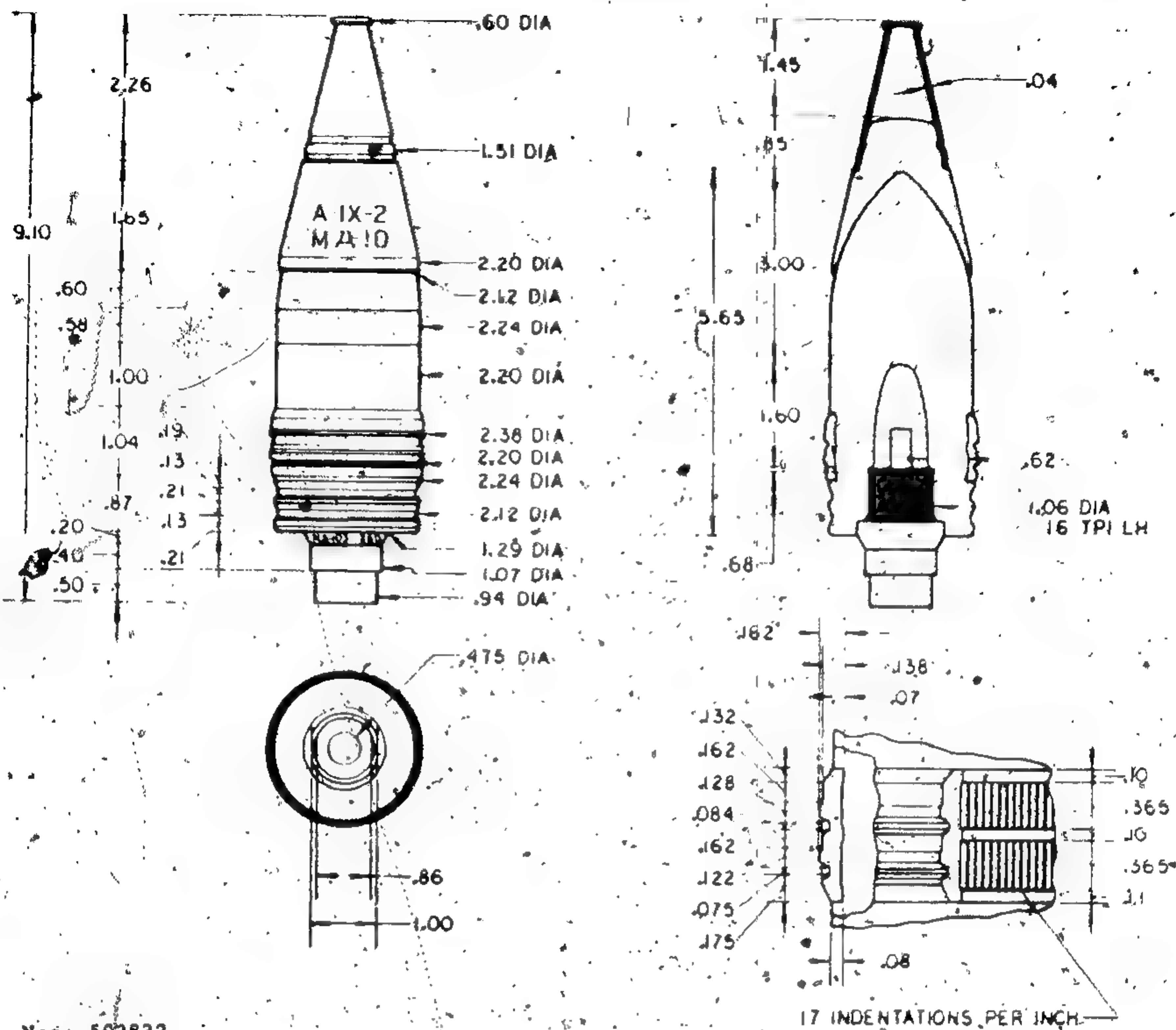
Figure 30. Soviet 57-mm Frag-T projectile Model OR-281.

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Original



Neg: 502832

ALL DIMENSIONS IN INCHES

Caliber	57 mm	Known using	
Identification	BR-281	weapons	AA Gun S-60 and
Type	APC-T		SP AA Gun ZSU-57-2
Weight (fuzed)	6.22 lb		
Bursting charge	0.04 lb		
	RDX/aluminum		
Fuze	Model MD-10		
	base detonating		

Figure 31. Soviet 57-mm APC-T projectile Model BR-281.

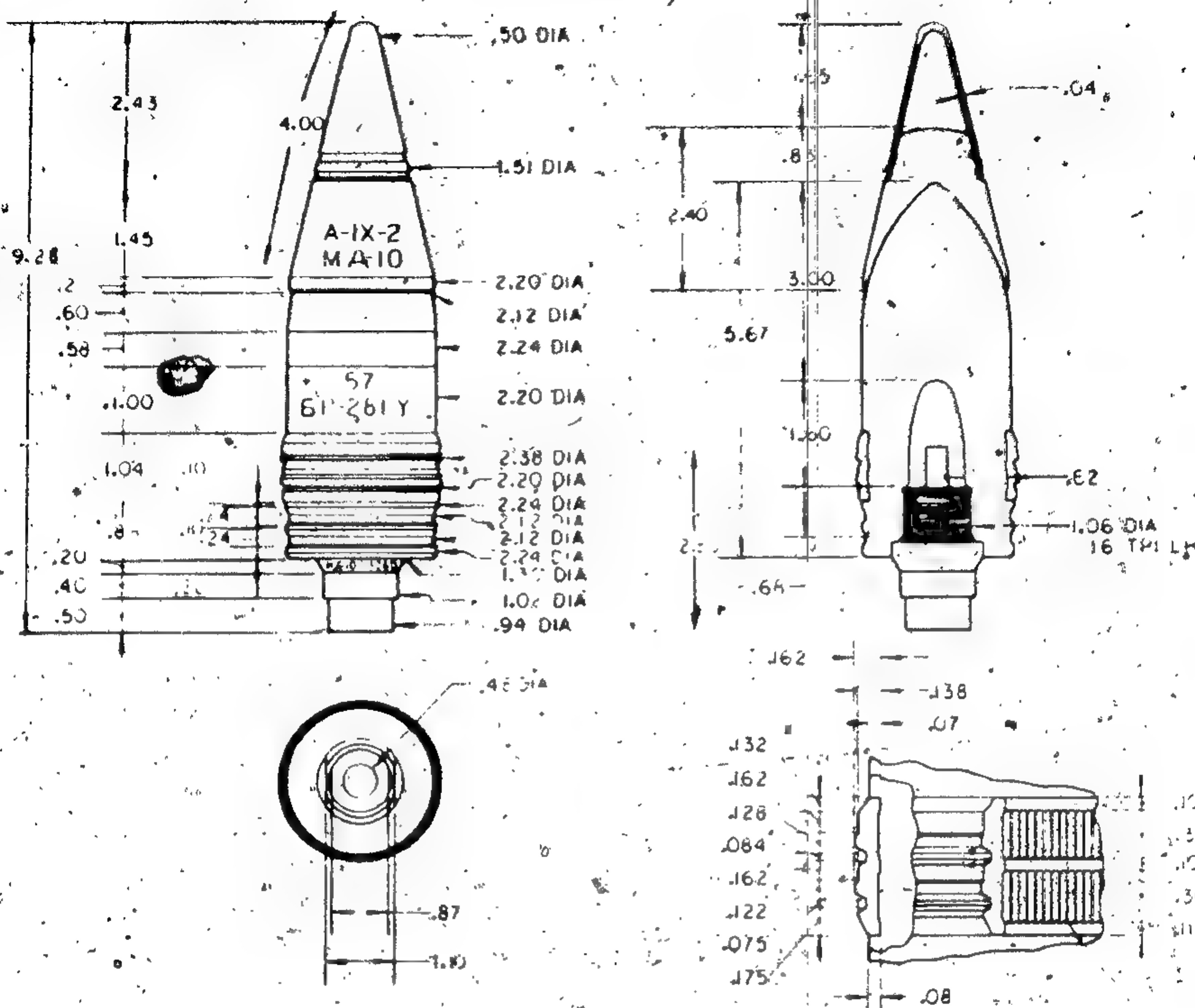
UNCLASSIFIED



UNCLASSIFIED

Original

ST-CW-07-29-74



Neg. 502833

ALL DIMENSIONS IN INCHES

Caliber ----- 57 mm  
 Identification ---- BR-281U  
 Type ----- APC-T  
 Weight (fuzed) ---- 6.21 lb  
 Bursting charge ---- 0.04 lb  
 RDX/aluminum

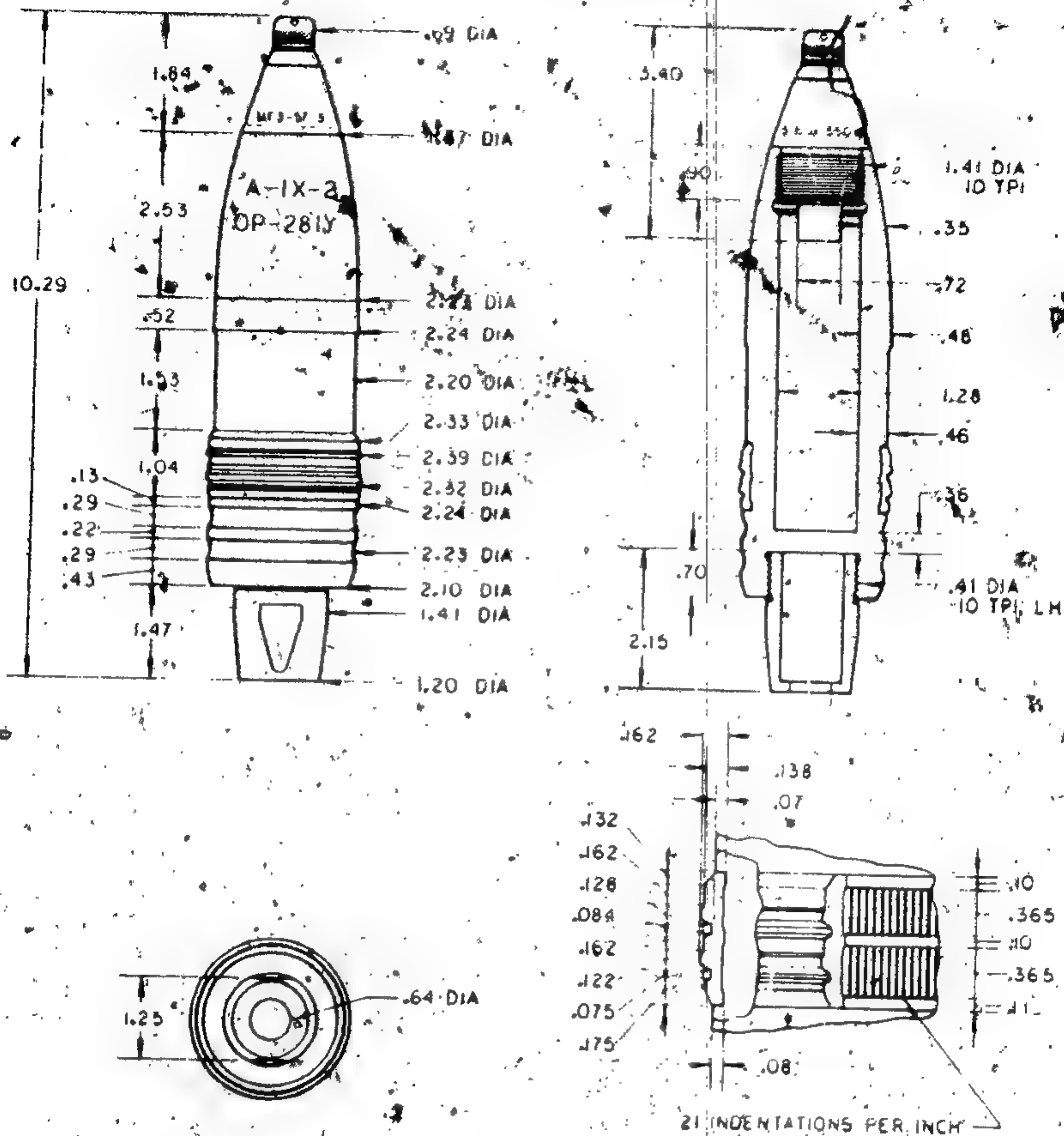
Fuze ----- Model MD-10 base detonat-  
 ing  
 Known using -----  
 weapons ----- AA Gun S-60 and SP AA Gun  
 ZSU-57-2  
 Remarks ----- This projectile differs  
 chiefly from the BR-281 in  
 metallurgical composition.

Figure 31a. Soviet 57-mm APC-T projectile Model BR-281U.

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Original



Neg. 502834

ALL DIMENSIONS IN INCHES

Caliber	57 mm	Fuze	Model MG-57 PDSD
Identification	OR-281U	Known using	
Type	Frag-T	weapons	AA gun S-60 and SP
Weight (fuzed)	6.28 lb		AA gun ZSU-57-2
Bursting charge	0.34 lb	Remarks	Also uses Model MCZ-57
RDX/aluminum			point detonating self-
			destroying fuze.

Figure 32. Soviet 57-mm frag-T projectile Model OR-281U.

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Original

ST-CW-07-29-74

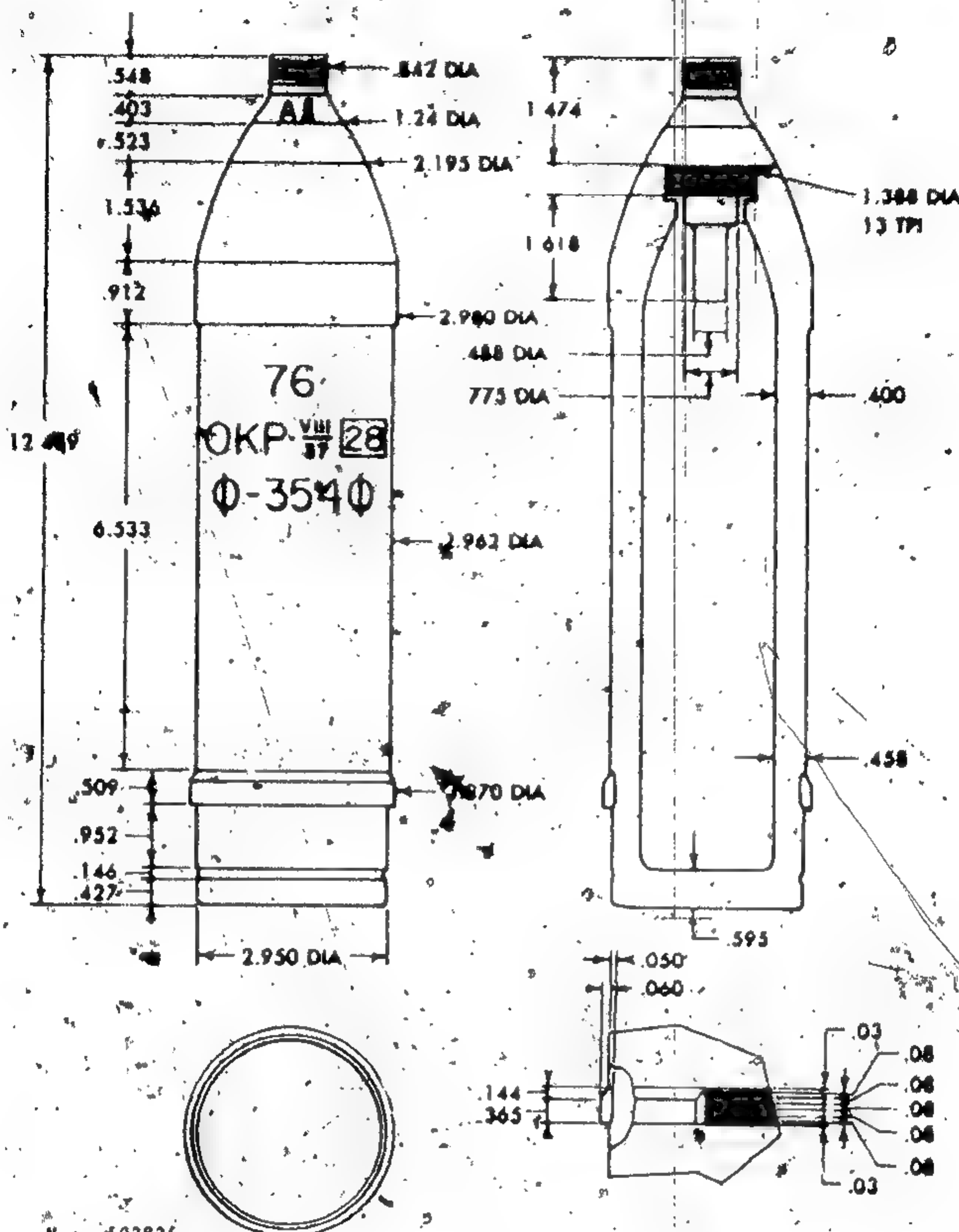


Fig. 502835

1310 002 002 00076 009 00

A-S (CB) 1-02835

ALL DIMENSIONS IN INCHES

14 ROWS OF RAISED  
PYRAMIDS PER INCH

Caliber ----- 76 mm  
Identification ----- F-354F  
Type ----- HE  
Weight (fuzed) ----- 14.13 lb  
Bursting charge ----- 1.75 lb TNT  
Fuze ----- Model AD  
point detonating

Known using  
weapons -----

Regimental gun  
(howitzer)  
M1927; field  
guns M1902/30,  
M1936 (F-22),  
and M1942 (ZIS-  
3); and SR M1942/  
43 (SU-76)

Remarks -----

Also uses Model  
AD-2 point detonat-  
ing fuze.

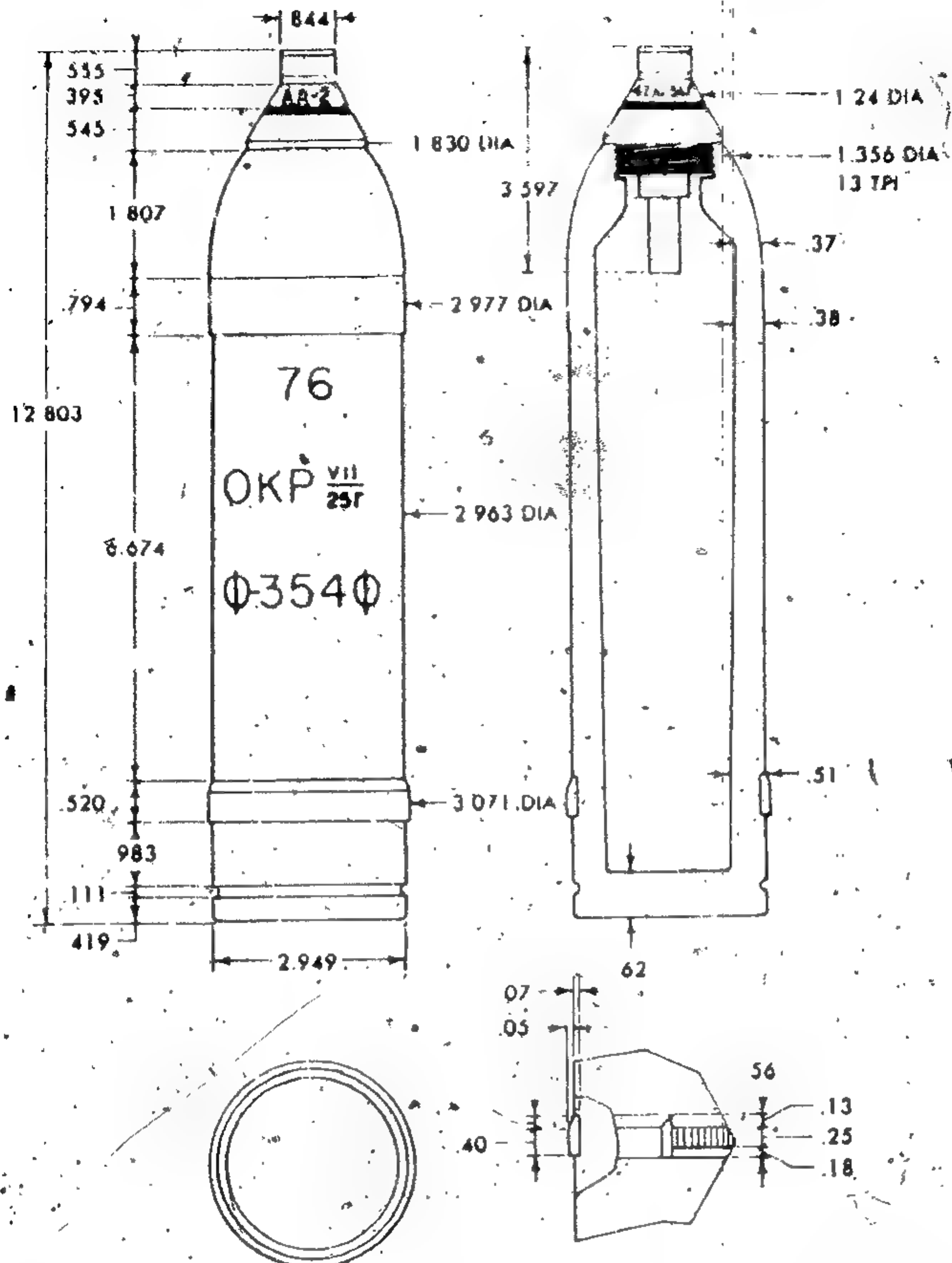
Figure 33. Soviet 76 mm HE projectile Model K-354F.

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Original



ALL DIMENSIONS IN INCHES

13 INDENTATIONS PER INCH

Neg. 502836

Caliber	76 mm	Known using	
Identification	F-354F	weapons	Regimental gun
Type	HE		(howitzer) M1927;
Weight (fuzed)	14.13 lb		field guns M1902/
Bursting charge	1.73 lb		30, M1936 (F-22)
Schneiderite			and M1942 ZIS-3);
Fuze	Model AD-2		and SP gun M1942/43
point detonating			(SU-76)
		Remarks	Also uses Model AD
			point detonating fuze.

Figure 34. Soviet 76-mm HE projectile Model F-354F (variant).

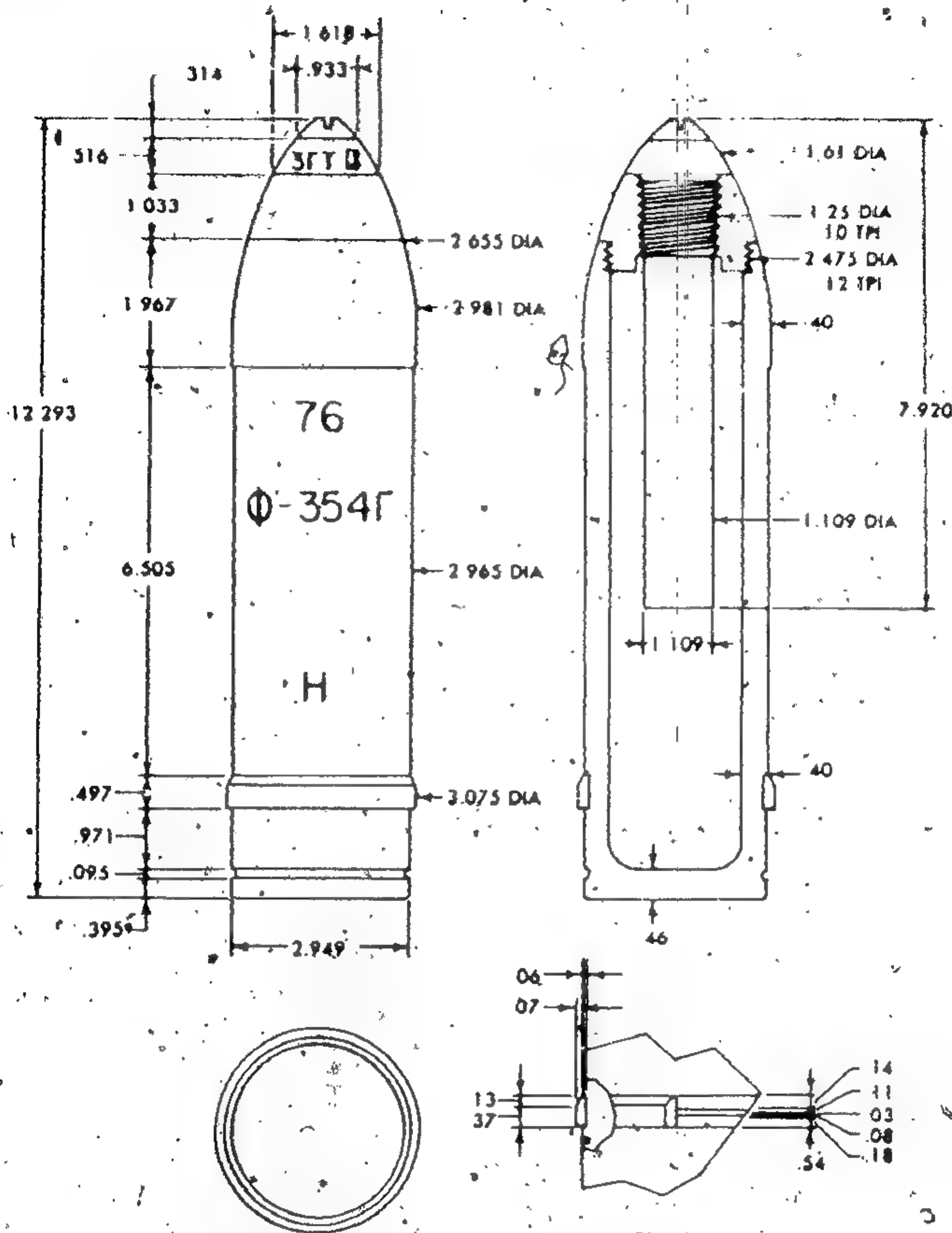
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UNCLASSIFIED

Original

ST-CW-07-29-74



Neg. 502837 ALL DIMENSIONS IN INCHES

MILLED RIDGE AT  
REGULAR INTERVALS

Caliber ----- 76 mm  
Identification ----- F-354G  
Type ----- HE  
Weight (fuzed) ----- 14.33 lb  
Bursting charge ----- 1.73 lb TNT  
Fuze ----- Model 3 GT  
point detonating

Known using  
weapons -----

Regimental gun  
(howitzer) M1927;  
mountain gun (how-  
itzer) M1909; field  
guns M1902/30, M1936  
(F-22), and M1942  
(ZIS-3) and SP gun  
M1942/43 (SU-76)

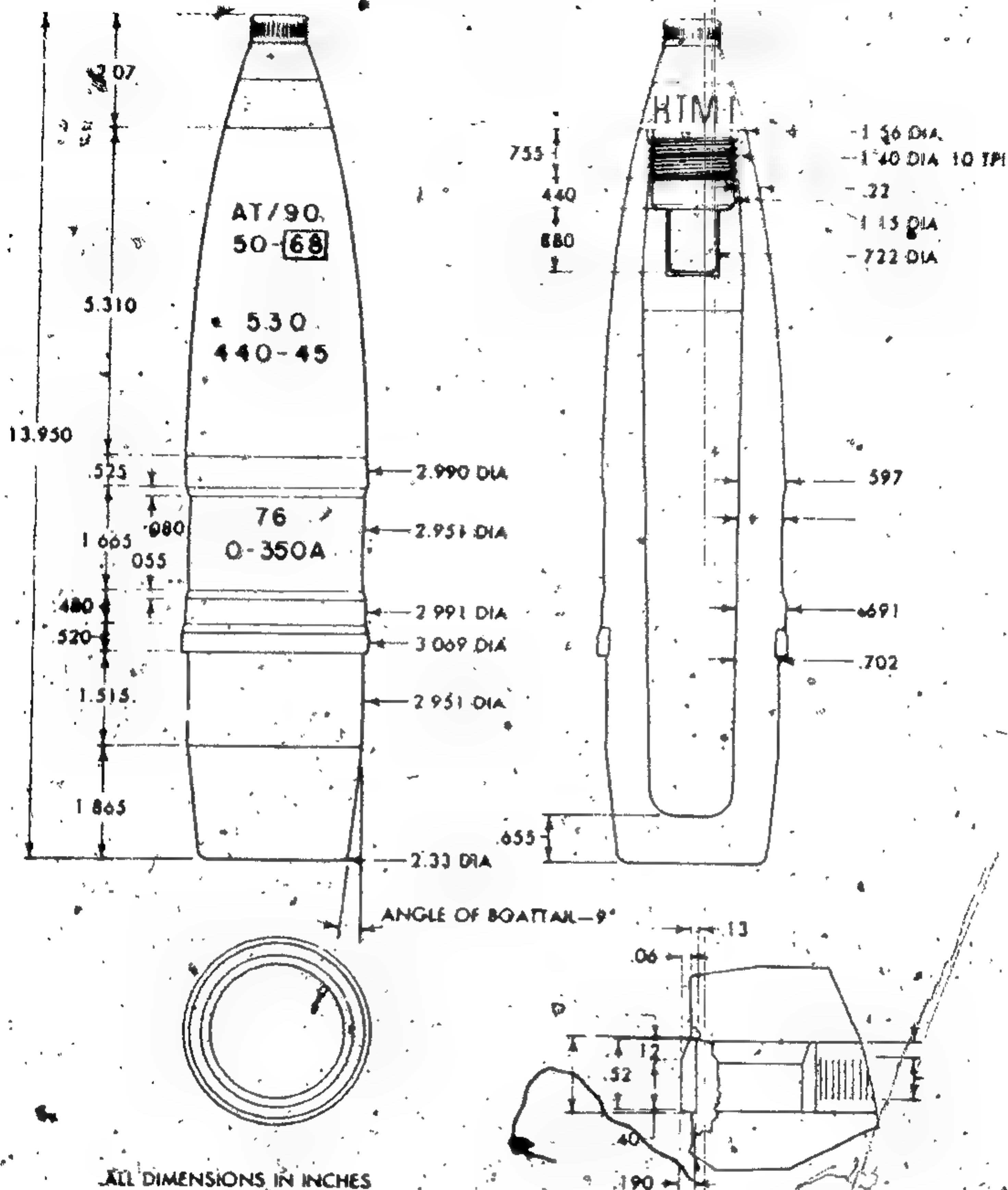
Figure 35. Soviet 76-mm HE projectile Model F-354G.

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UNCLASSIFIED

ST-CW-07-29-74

Original



Caliber ----- 76 mm  
 Identification ----- O-350A  
 Type ----- Frag  
 Weight (fuzed) ----- 13.69 lb  
 Bursting charge ----- 1.08 lb  
 TNT/amatol  
 Fuze ----- Model KTM-1  
 point detonating

Known using  
 weapons -----

Mountain gun (how-  
 itzer) M1938, field  
 gun M1942 (ZIS-3),  
 tank gun D-56T, and  
 SP gun M1942/43  
 (SU-76)

Remarks -----

Also uses Model AT-1  
 and KTMZ-1 point  
 detonating fuze.

Figure 36. Soviet 76-mm frag projectile Model O-350A.

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Original

ST-CW-07-29-74

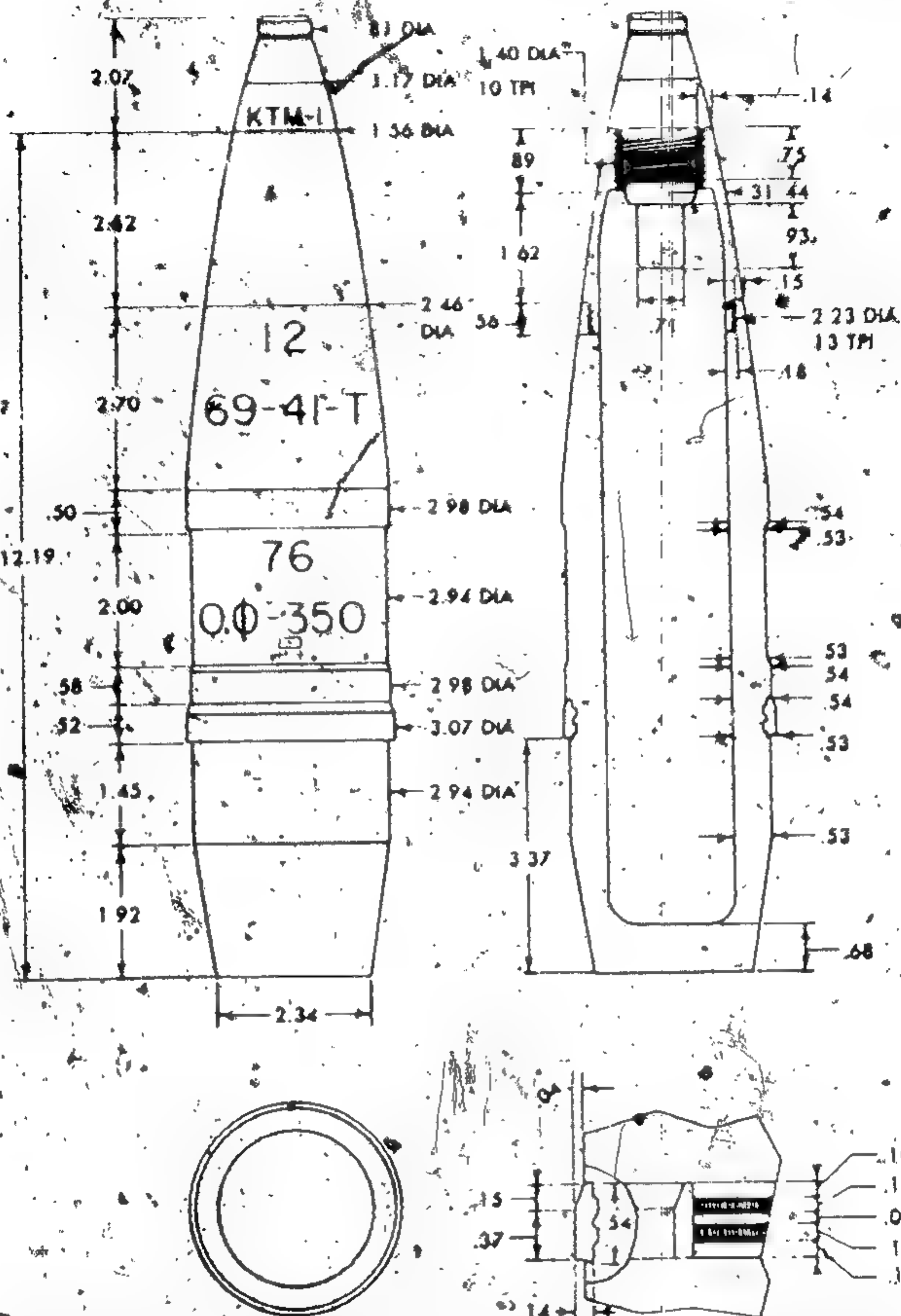


Fig. 502839 ALL DIMENSIONS IN INCHES

Caliber	76 mm	Fuze	Model KTM-1 point detonating
Identification	OF-350		
Type	Frag-HE	Known using	
Weight (fuzed)	13.67 lb	weapons	All 76-mm guns except antiaircraft guns
Bursting charge	1.57 lb TNT	Remarks	Also uses Models KT-1, KTM-1-U <sub>2</sub> and KTMZ-1 point detonating fuzes.

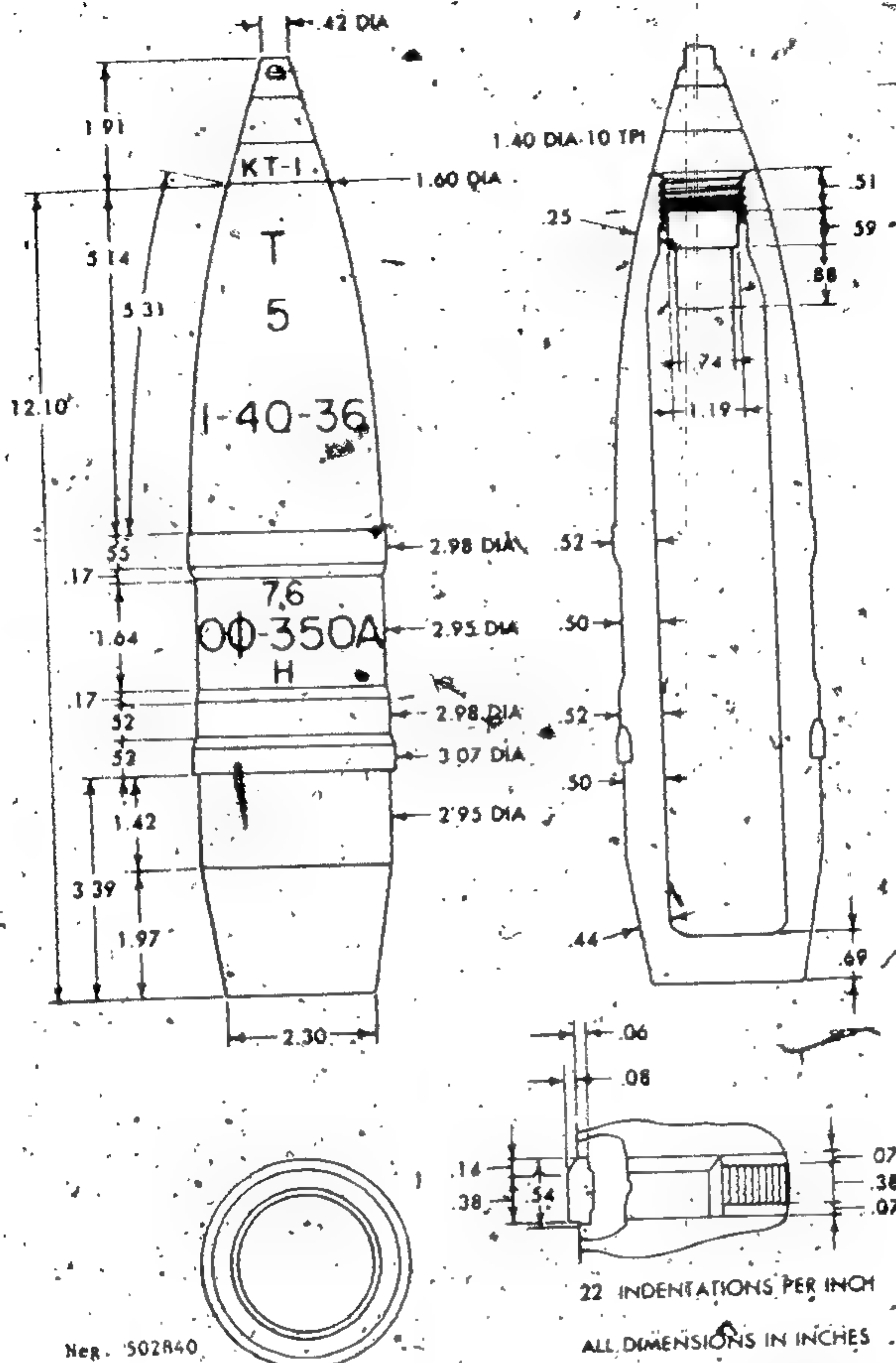
Figure 37. Soviet 76-mm frag-HE projectile Model OF-350.

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ST-CW-07-29-74

Original



Caliber ----- 76 mm  
 Identification ----- OF-350A  
 Type ----- Frag-HE  
 Weight (fuzed) ----- 13.69 lb  
 Bursting charge ----- 1.57 lb TNT

Fuze ----- Model KT-1 point  
 detonating  
 Known using -----  
 weapons ----- All 76-mm guns and  
 howitzers except  
 antiaircraft guns  
 Remarks ----- Also uses Models KTM-1  
 and KTMZ-1 point  
 detonating fuzes.

Figure 38. Soviet 76-mm frag-HE projectile Model OF-350A.

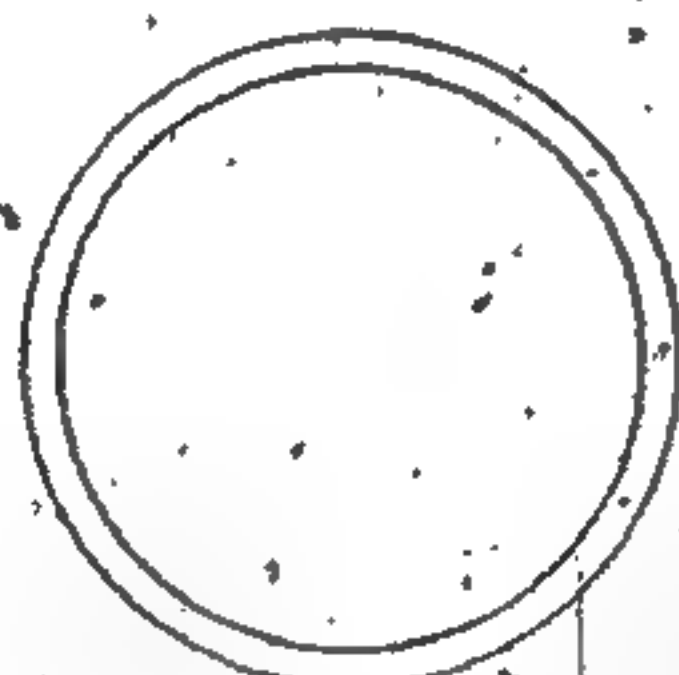
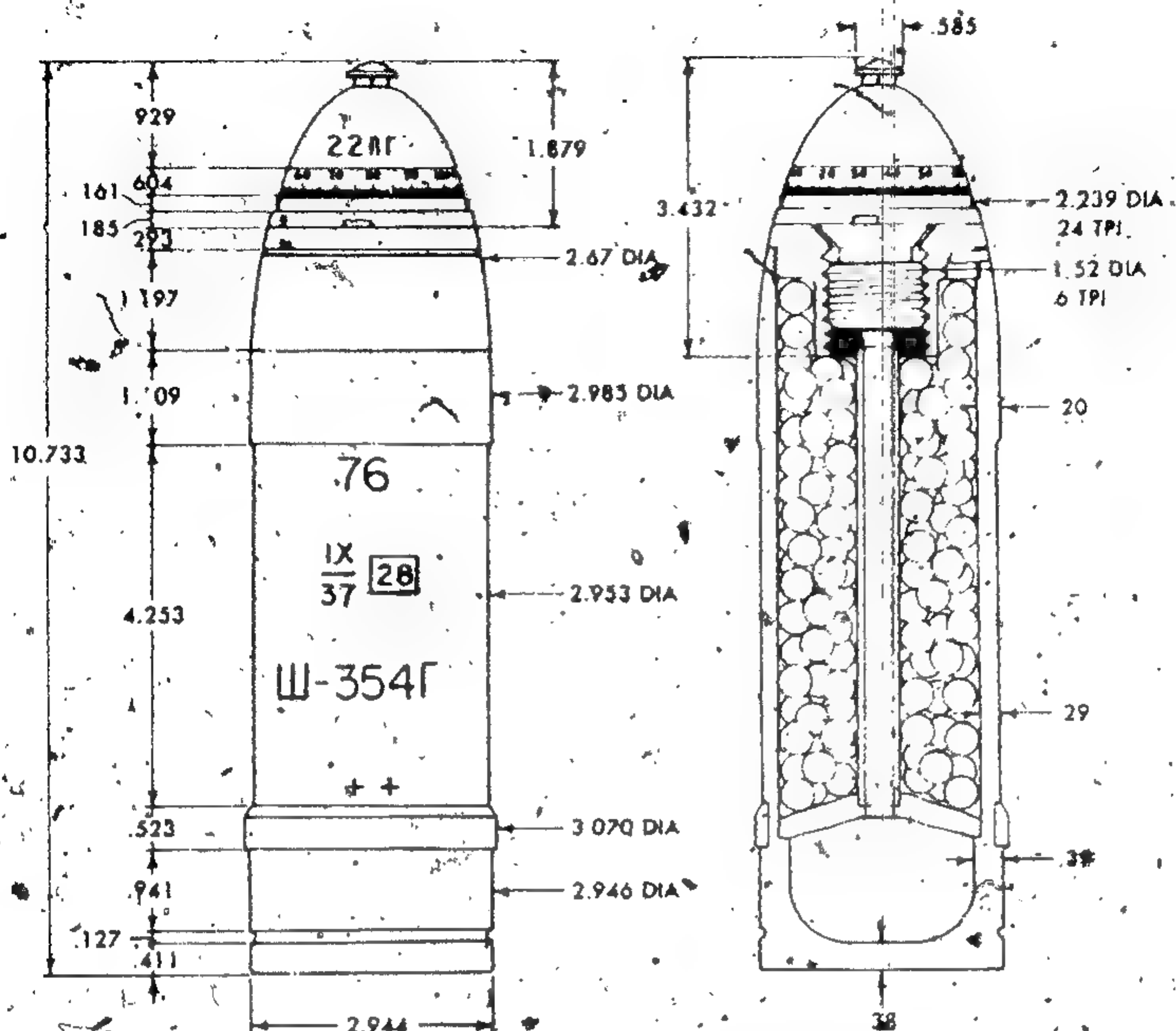
UNCLASSIFIED



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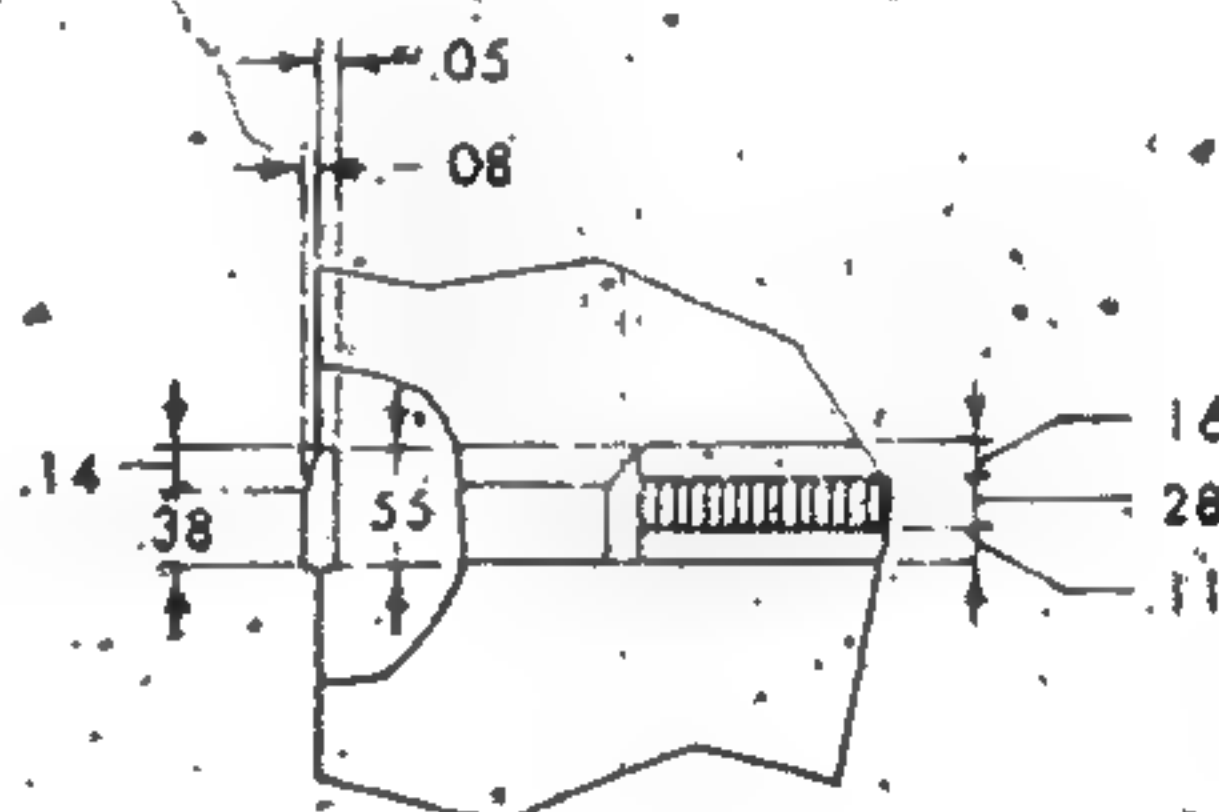
Original

ST-CW-07-29-74



Neg. 50284T

ALL DIMENSIONS IN INCHES



28 INDENTATIONS PER INCH

Caliber ----- 76 mm  
 Identification ----- Sh-354G  
 Type ----- Shrapnel  
 Weight (fuzed) ----- 14.55 lb  
 Bursting charge ----- 0.187 lb  
 black powder  
 Fuze ----- Model 22PG  
 TSQ

Known using  
 Weapons -----

Field gun M1942  
 (ZIS-3) and SP  
 gun M1942/43  
 (SU-76)

Remarks -----

The fuze illustrated  
 above has two time  
 rings, but the flash-  
 tube locking nut in the  
 base of the adapter has  
 been omitted from the drawing.

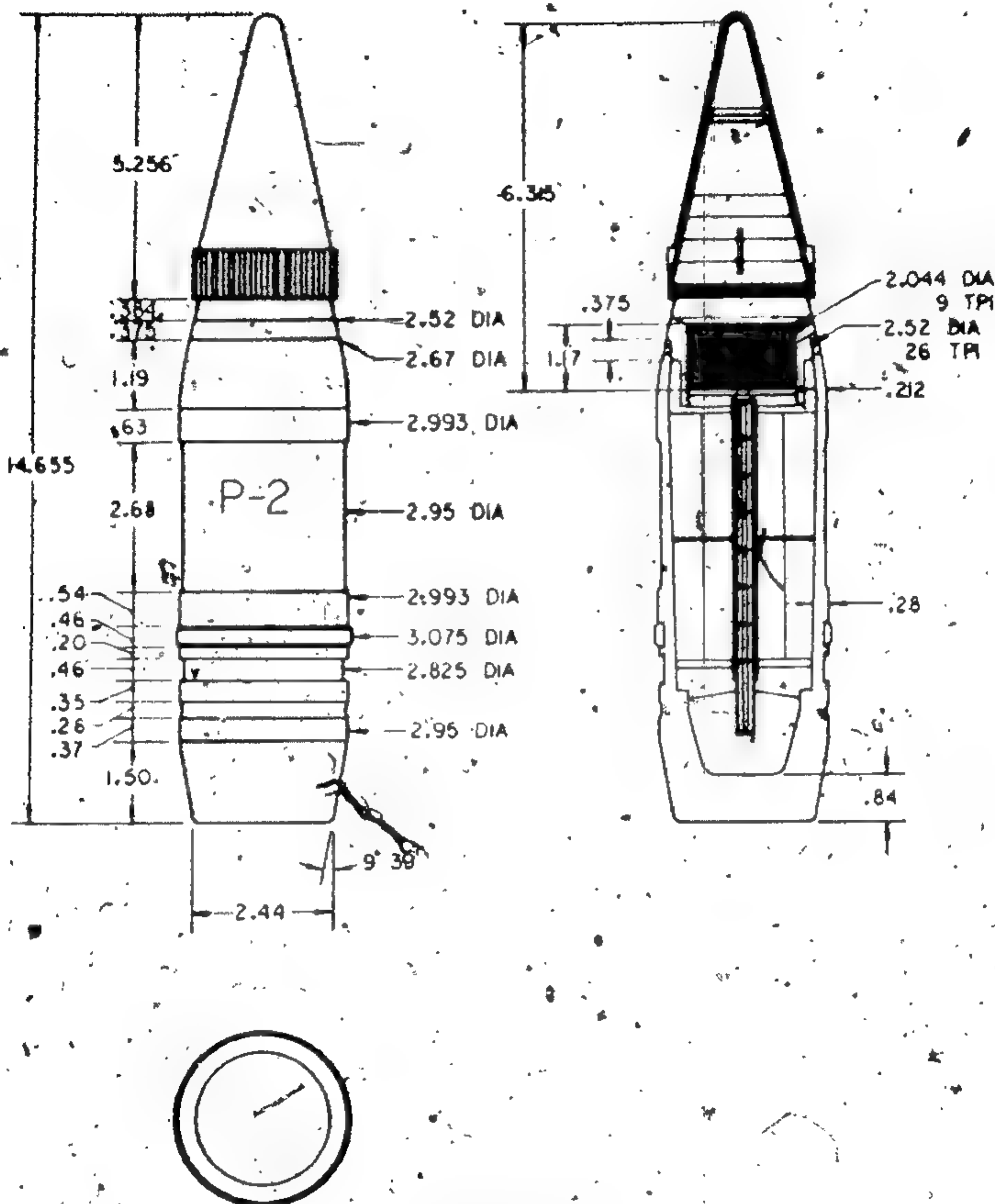
Figure 39. Soviet 76-mm shrapnel projectile Model Sh-354G.

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Original



Neg. 502842

ALL DIMENSIONS IN INCHES

Caliber	76 mm	Known using	
Identification	Sh-361	weapons	Field gun M1942 (ZIS-3),
Type	Shrapnel		SP gun M1942/43 (SU-76),
Weight (fuzed)	14.32 lb		and AA gun M1938
Bursting charge	0.19 lb	Remarks	The projectile contains
black powder			two bundles; 24 steel
Fuze	Model T-3		bars each. Fuze is
	time		shown with protective
			cover installed.

Figure 40. Soviet 76-mm shrapnel projectile Model Sh-361.

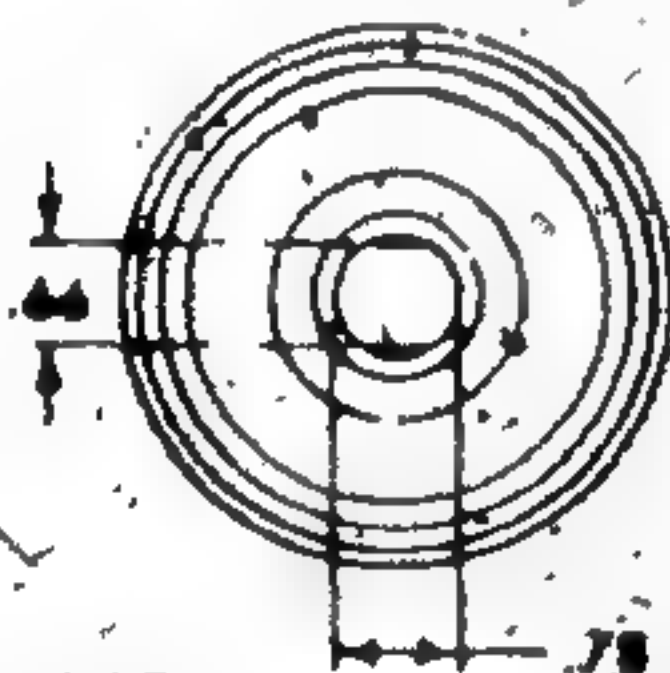
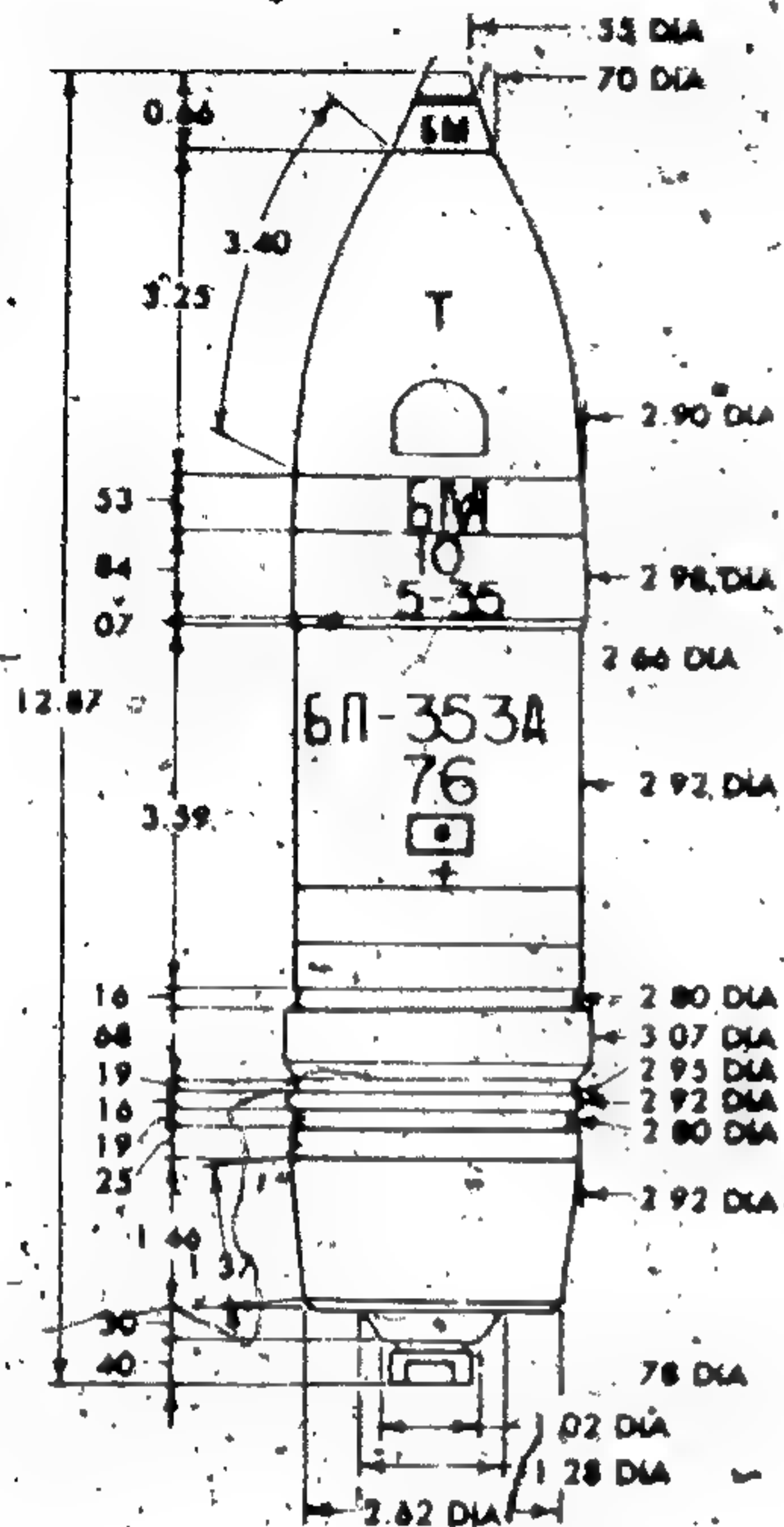
UNCLASSIFIED



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Original

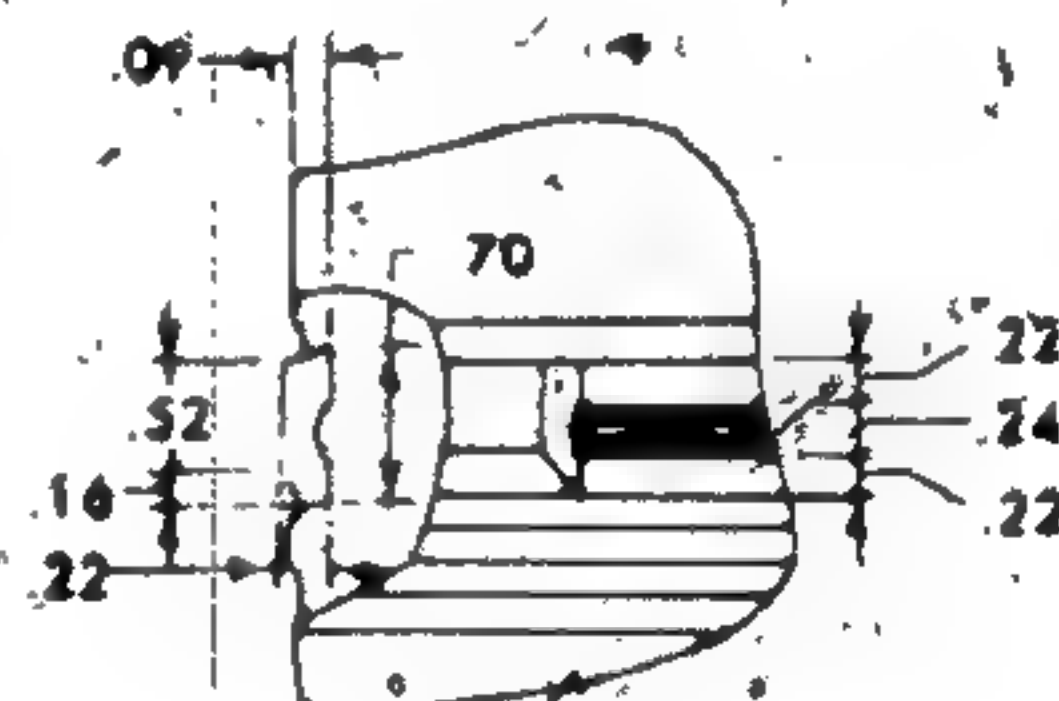
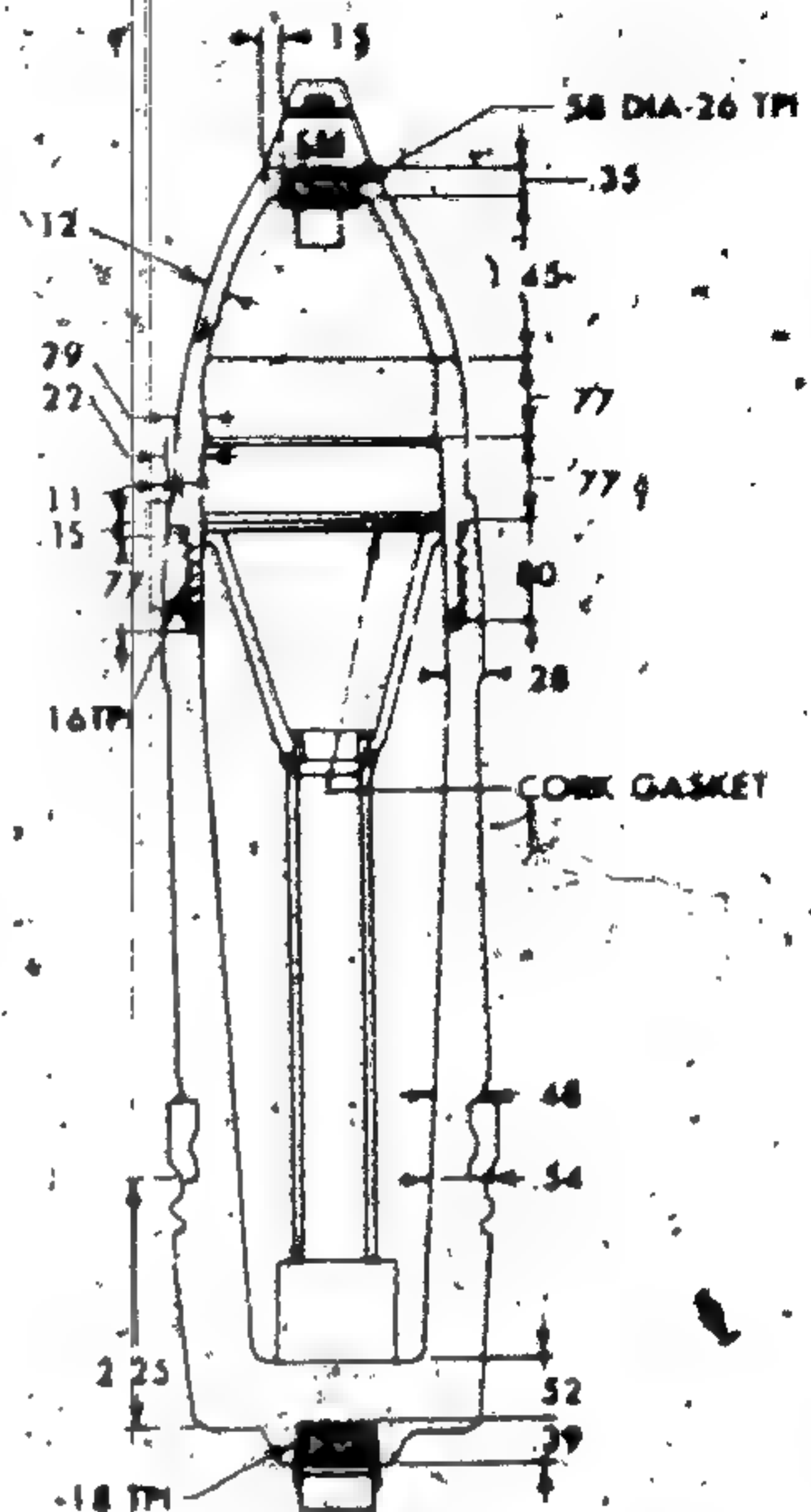
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Neg. 502843

ALL DIMENSIONS IN INCHES

Caliber ——— 76 mm  
 Identification ——— BP-353A  
 Type ——— HEAT  
 Weight (fuzed) ——— 11.93 lb.  
 Bursting charge ——— 1.37 lb RDX/TNT



13 VERTICAL CUTS IN  
 RIDGE PER INCH

Fuze ——— Model BM PIBD  
 Known using  
 weapons ——— Regimental guns (how-  
 itzers) M1927 and M1943  
 Remarks ——— Has removable tracer  
 element.

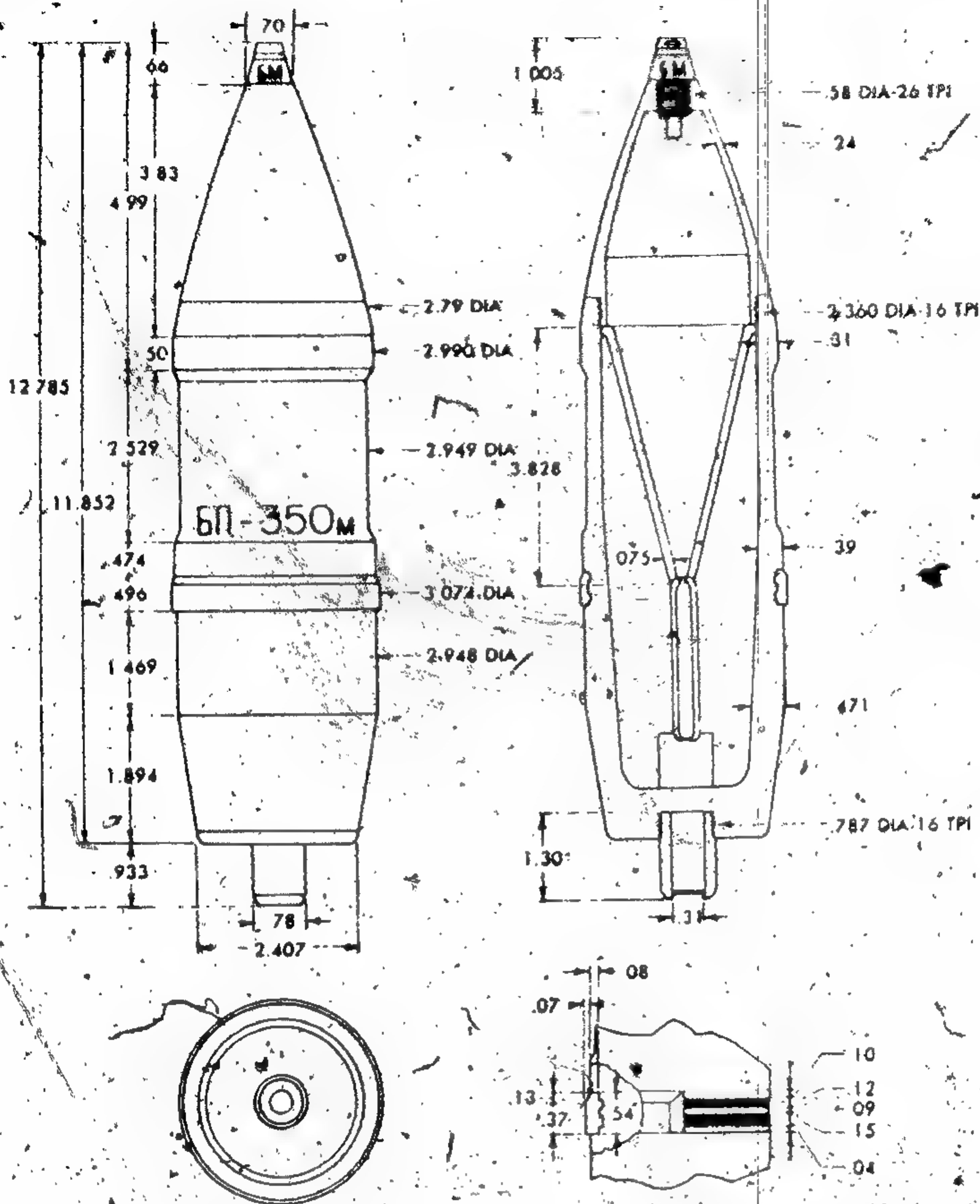
Figure 41. Soviet 76-mm HEAT projectile Model BP-353A.

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Original



ALL DIMENSIONS IN INCHES

18 INDENTATIONS PER INCH

Caliber — 76 mm  
 Identification — BP-350M  
 Type — HEAT  
 Weight (fuzed) — 8.70 lb  
 Bursting charge — 1.14 lb RDX/TNT

Fuze — Model BM PIBD  
 Known using weapons — Field gun M1942 (ZIS-3), tank gun D-56T, and SP gun M1942/43 (SU-76)  
 Remarks — Has removable tracer element.

Figure 42. Soviet 76-mm HEAT projectile Model BP-350M.

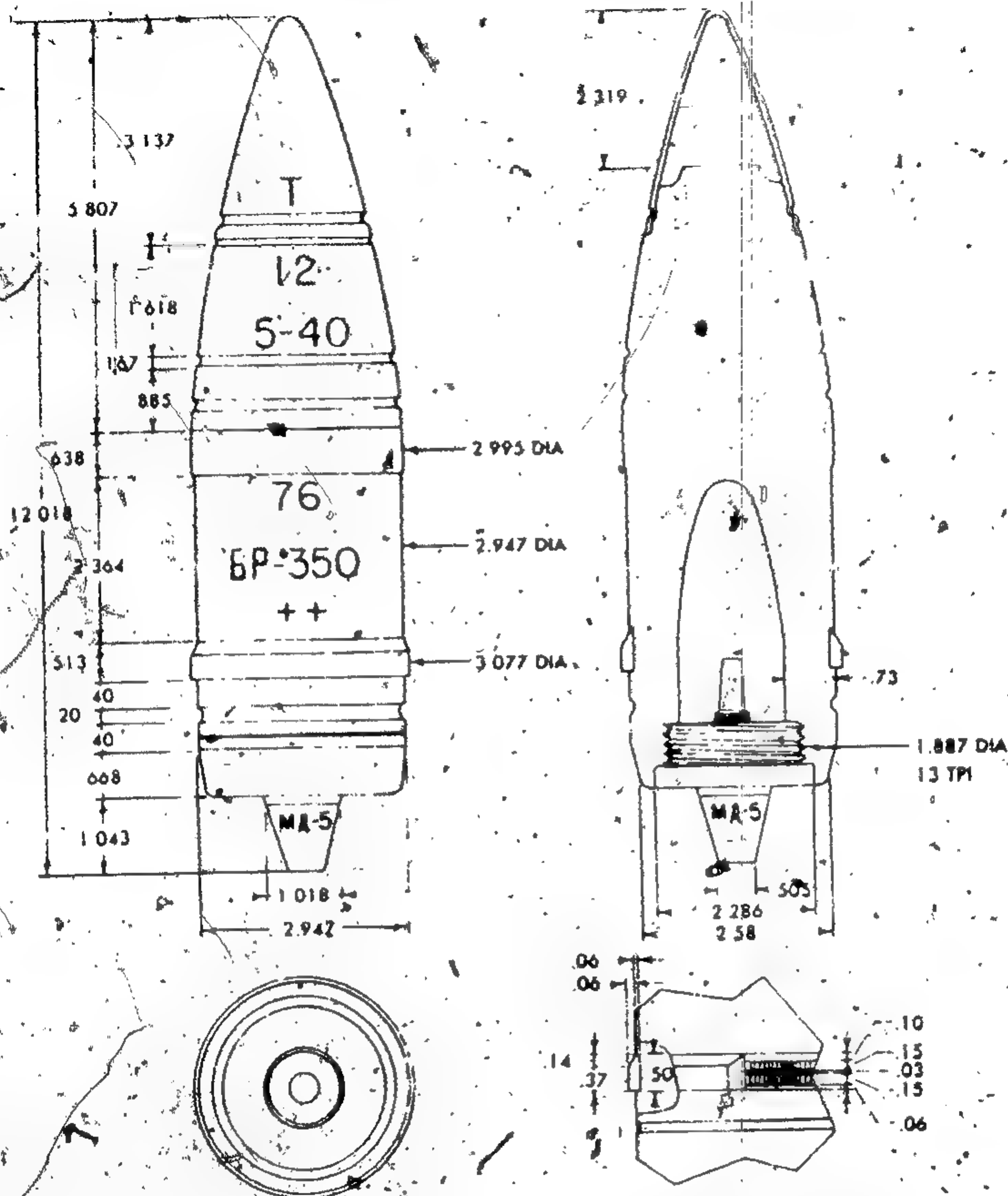
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Original

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ALL DIMENSIONS IN INCHES

18 INDENTATIONS PER INCH

Caliber ----- 76 mm  
 Identification ----- BR-350  
 Type ----- AP-T  
 Weight (fuzed) ----- 14.33 lb  
 Bursting charge ----- 0.34 lb TNT

Fuze ----- Model MD-5 base  
 detonating  
 Known using ----- Field gun M1942  
 weapons ----- (ZIS-3), tank gun;  
 D-56T, and SP gun  
 M1942/43 (SU-76)

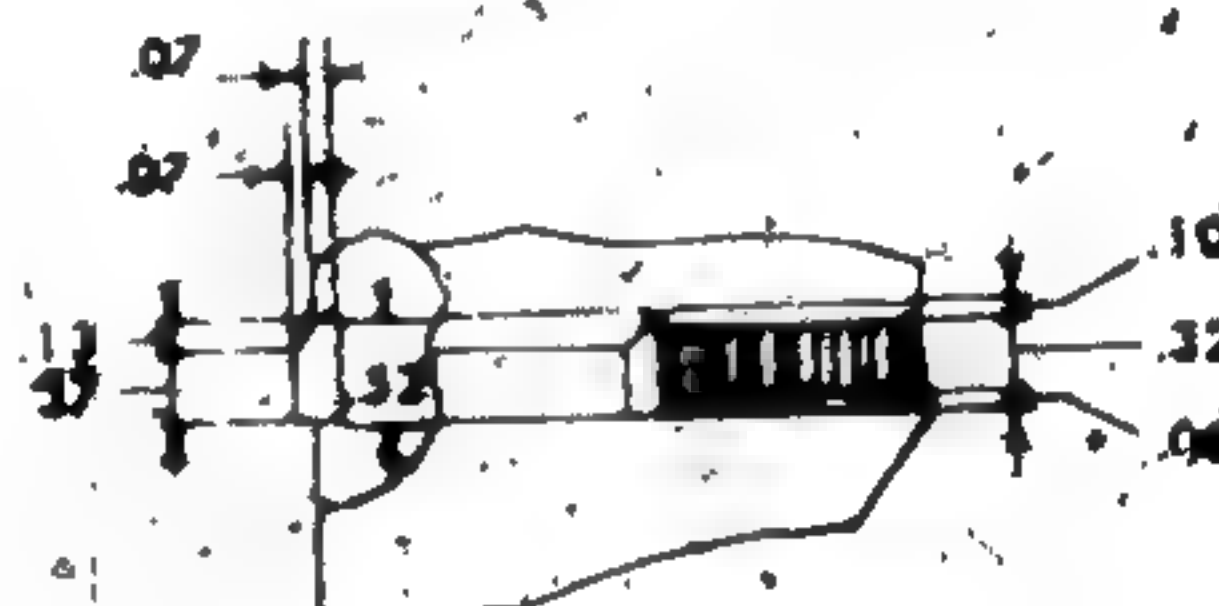
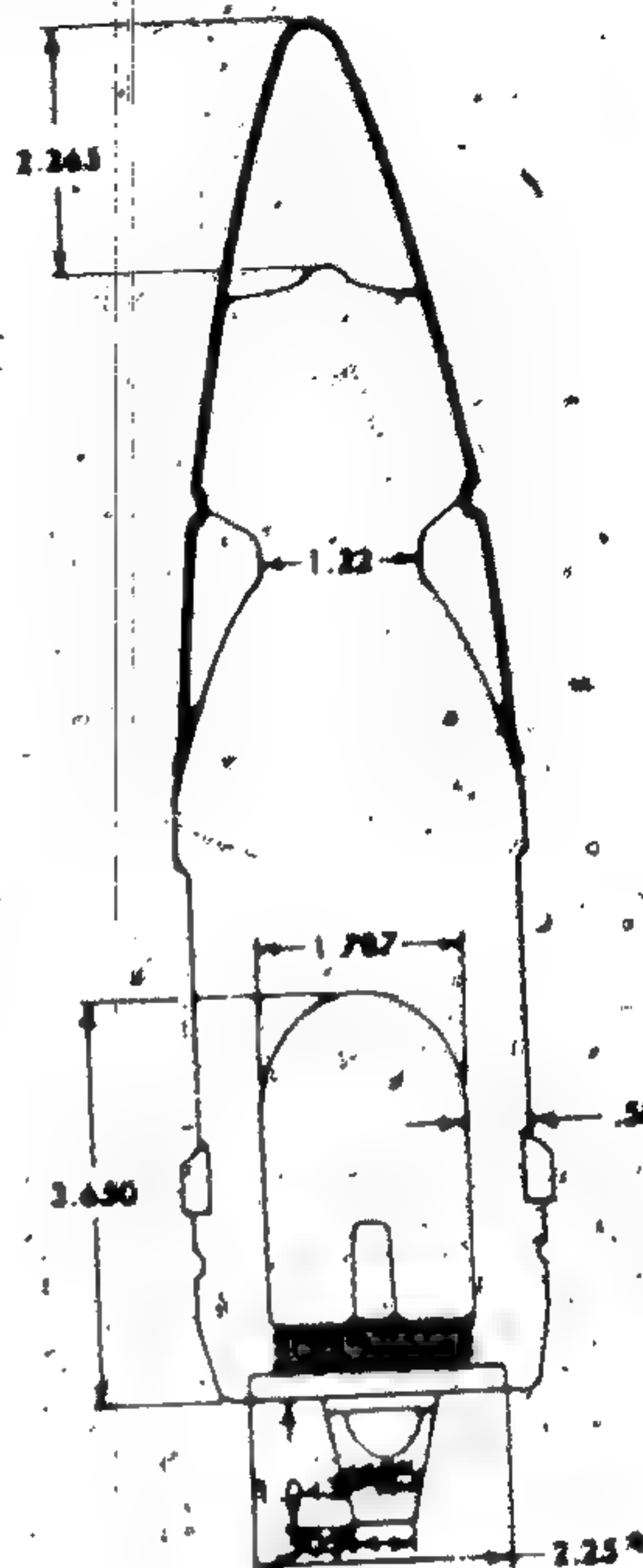
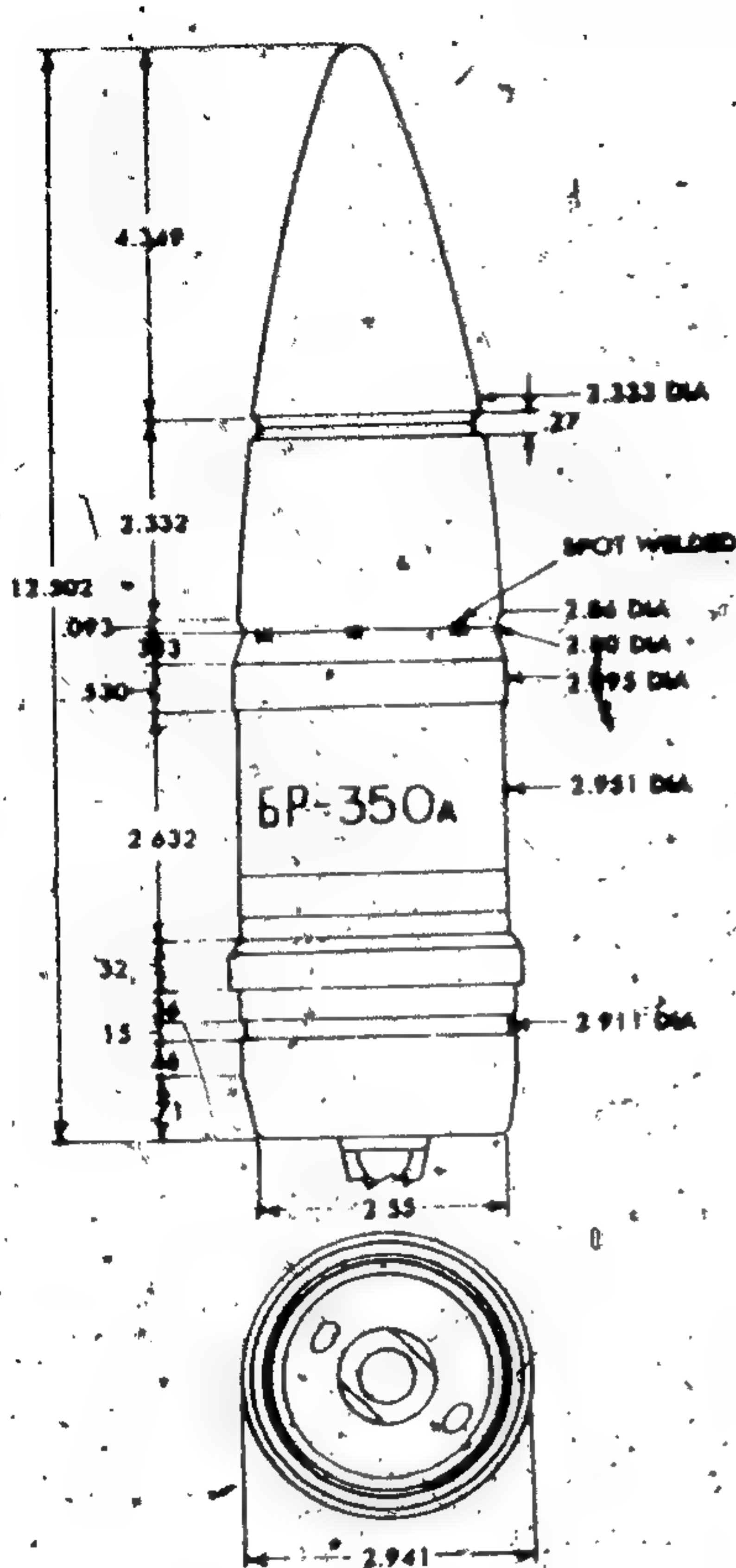
Figure 43. Soviet 76-mm AP-T projectile Model BR-350.

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Original



Neg. 502846

ALL DIMENSIONS IN INCHES

1/8 INCHES PER INCH

Caliber ----- 76 mm  
Identification ----- BR-350A  
Type ----- AP-T  
Weight (fuzed) ----- 13.89 lb  
Bursting charge ----- 0.34 lb TNT

Fuze ----- Model MD-5 base  
detonating  
Known using -----  
weapons ----- Field gun M1942  
(ZIS-3), tank gun  
D-56T, and SP gun  
M1942/43 (SU-76)  
Remarks ----- Also uses Models MD-6  
and MD-8 base detona  
ing fuzes.

Figure 44. Soviet 76-mm AP-T projectile Model BR-350A.

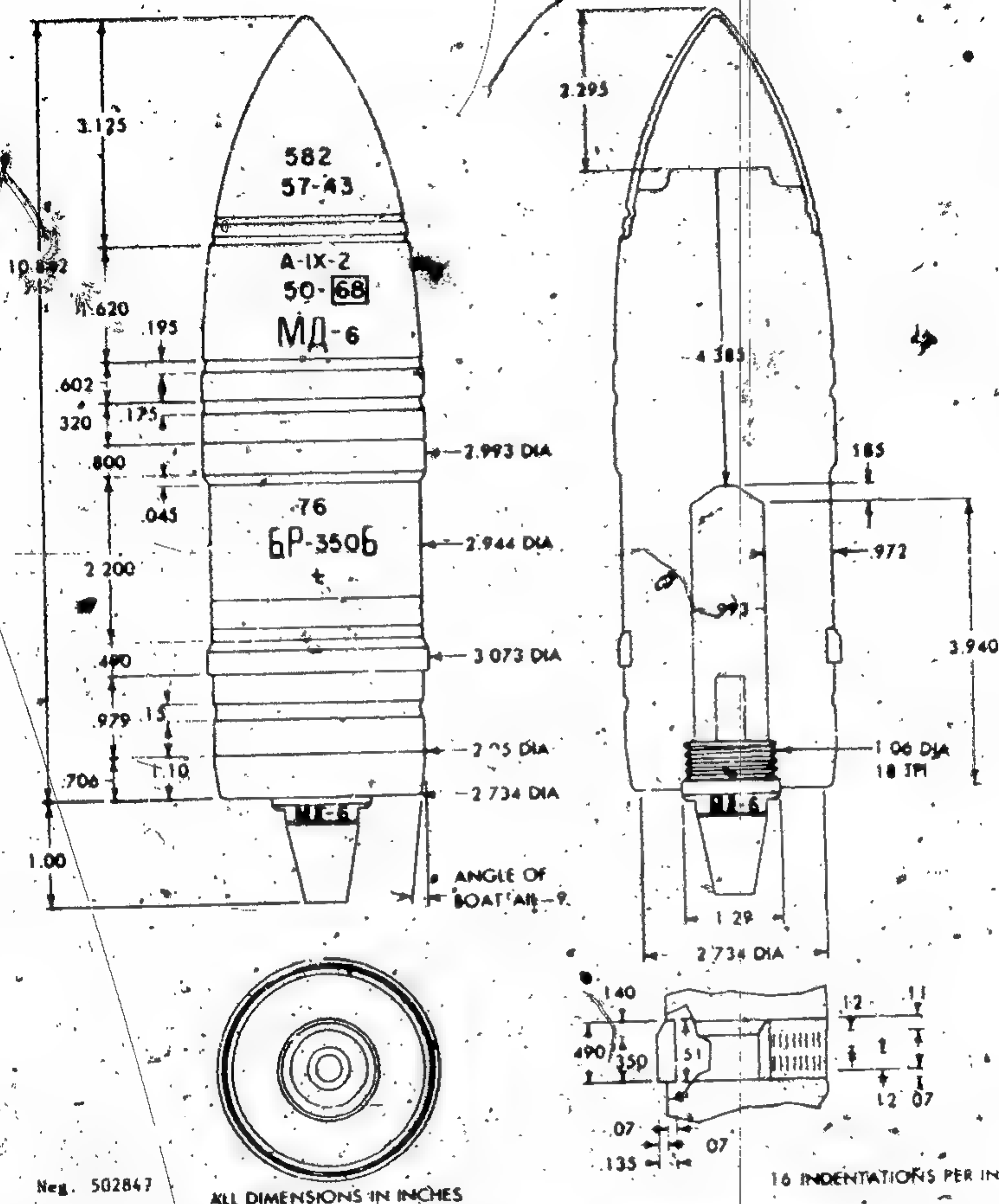
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Original

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Caliber ----- 76 mm  
 Identification ----- BR-350B  
 Type ----- AP-T  
 Weight (fuzed) ----- 14.33 lb  
 Bursting charge ----- 0.14 RDX/  
 aluminum  
 Fuze ----- Model MD-6  
 base  
 detonating

Known using weapons ----- Field gun M1942  
 (ZIS-3), tank gun  
 D-56T, and SP gun  
 M1942/43 (SU-76)  
 Remarks ----- A 0.5-in red color  
 band may appear at  
 the rotating band  
 the projectile. A  
 uses Models MD-5,  
 and MD-8 base det-  
 ing fuzes.

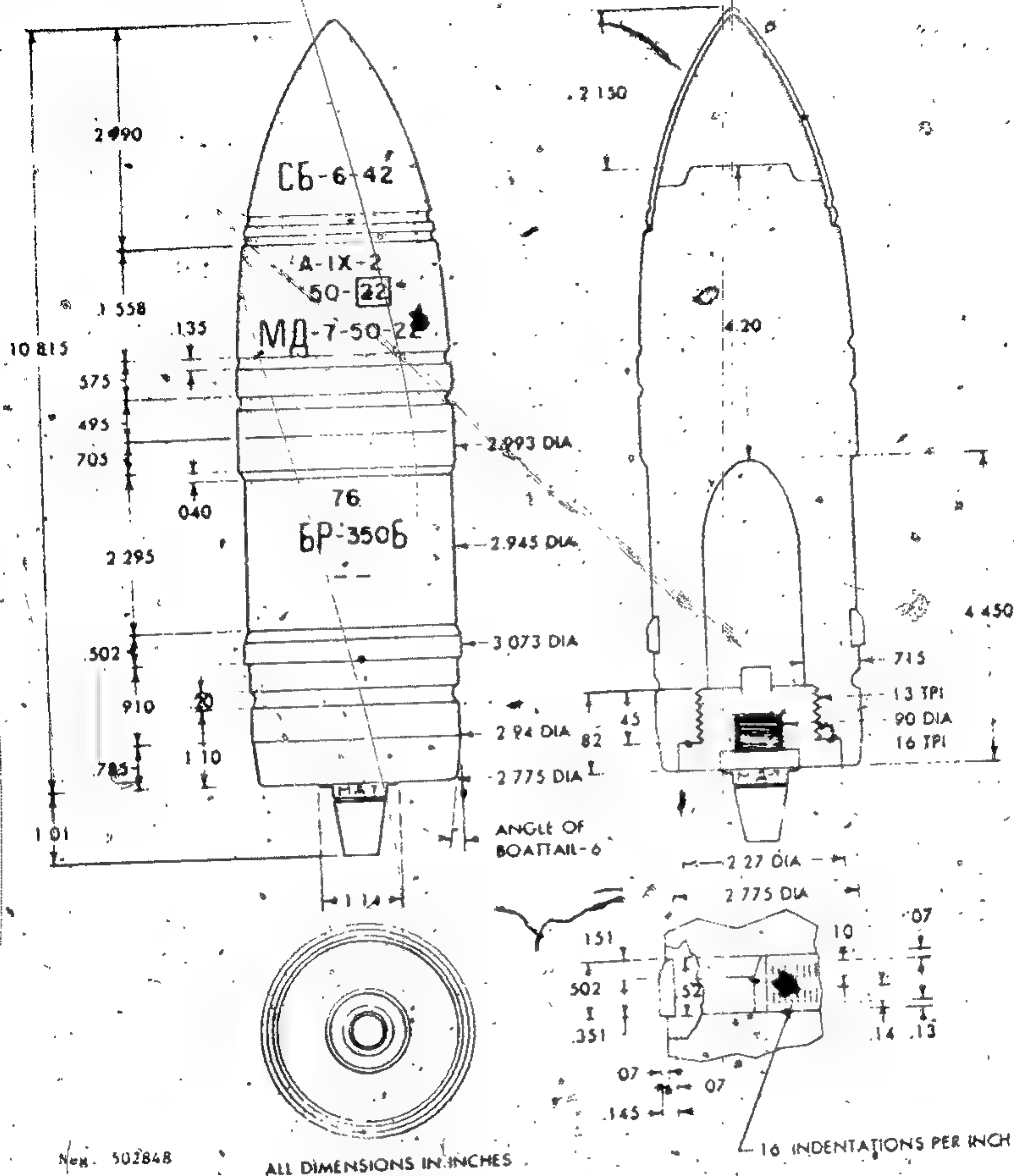
Figure 45. Soviet 76-mm AP-T projectile Model BR-350B.

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ST-CW-07-29-74.

Original



Caliber 76 mm  
 Identification BR-350B  
 Type AP-T  
 Weight (fuzed) 14.31 lb  
 Bursting charge 0.13 lb. RDX/  
 aluminum  
 Fuze Model MD-7  
 base detonat-  
 ing

Known using  
 weapons

Field gun M1942 (ZIS-3),  
 tank gun D-56T, and SP  
 gun M1942/43 (SU-76).  
 Remarks Also uses Model MD-5  
 base detonating fuze.  
 This projectile, using  
 the Model MD-5 or MD-7  
 fuzes, has been found with  
 or without the base fuze  
 adapter.

Figure 46. Soviet 76-mm AP-T projectile Model BR-350B (variant).

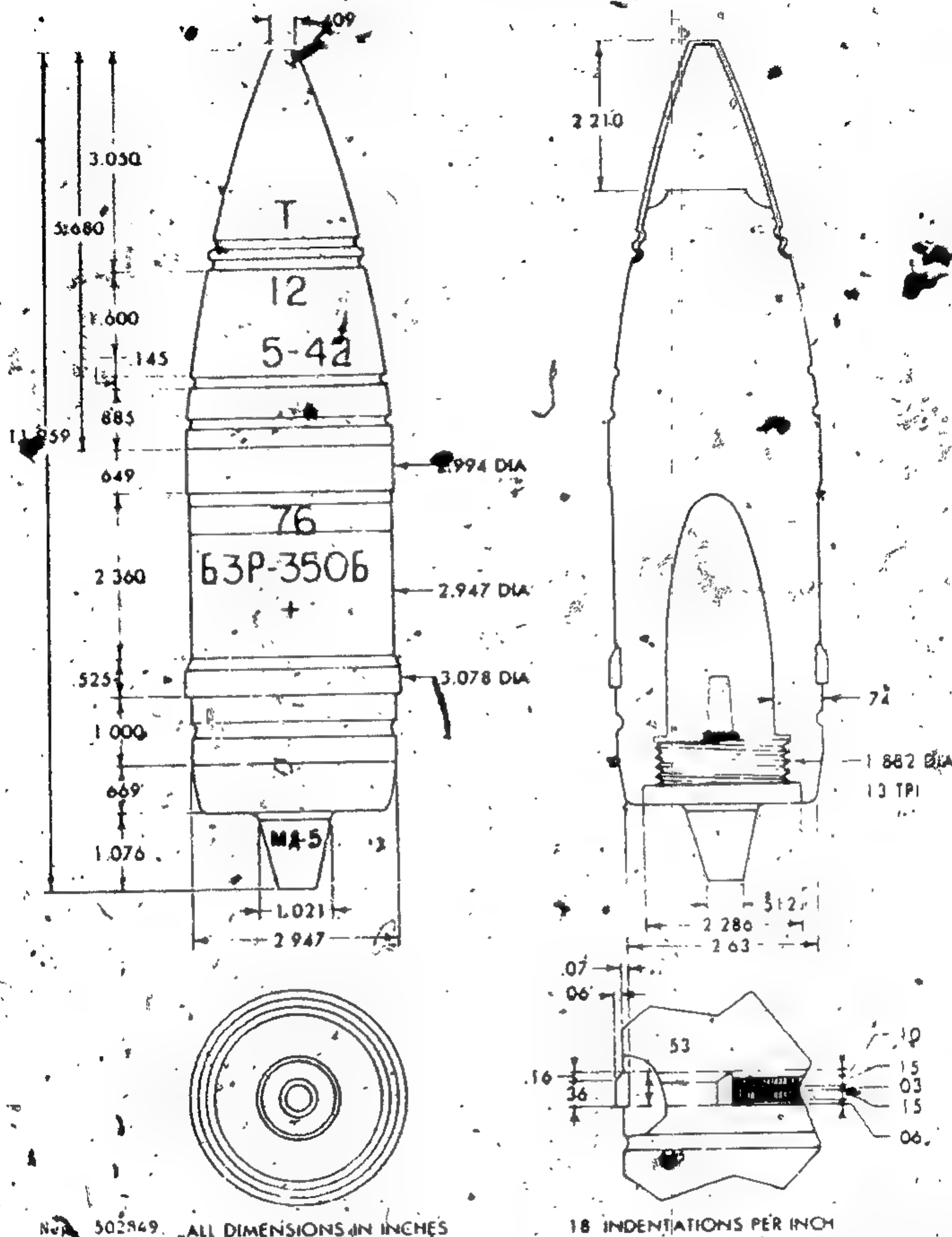
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Original



502949. ALL DIMENSIONS IN INCHES

18 INDENTATIONS PER INCH

Caliber ----- 76 mm  
 Identification ----- BZR-350B  
 Type ----- API-T  
 Weight (fuzed) ----- 14.30 lb  
 Bursting charge ----- 0.26 lb TNT  
 w/incendiary  
 pellet

Fuze ----- Model MD-5 base  
 detonating.  
 Known using  
 weapons ----- Field gun M1942 (ZIS-3),  
 tank gun D-56T, and SP  
 gun M1942/43 (SU-76)

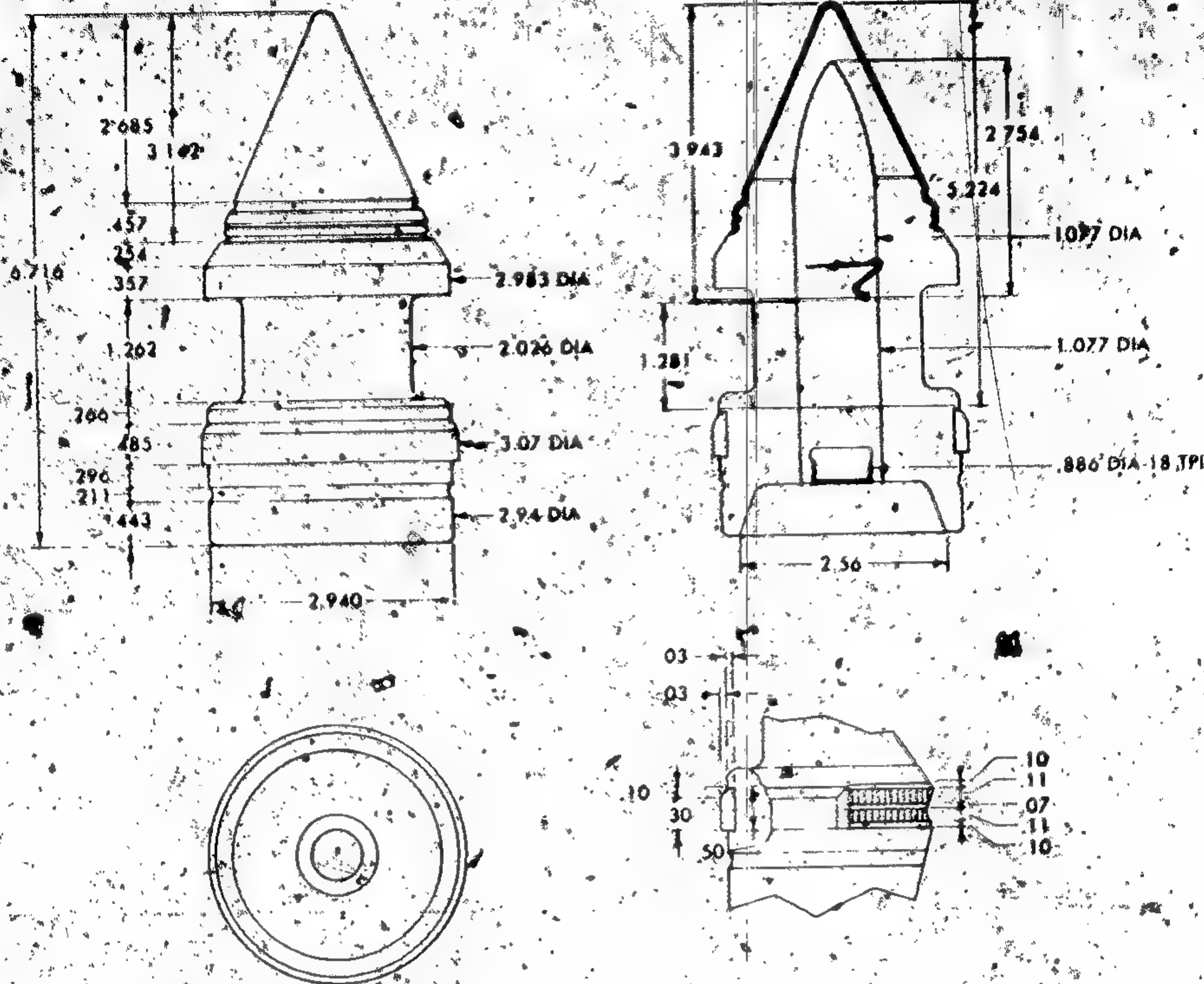
Figure 47. Soviet 76-mm APT-T projectile Model BZR-350B.

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Original



Net. 502850 ALL DIMENSIONS IN INCHES

18 INDENTATIONS PER INCH

Caliber ----- 76 mm  
Identification ----- BR-354P  
Type ----- HVAP-T  
Weight ----- 6.59 lb

Known using  
weapon -----

Field gun M1942 (ZIS-3), tank gun D-56T, and SP gun M1942/43 (SU-76).  
Weight of tungsten-carbide core and steel follow-through slug is 1.31 pounds.

Remarks -----

Figure 48. Soviet 76 mm HVAP-T projectile Model BR-354P.

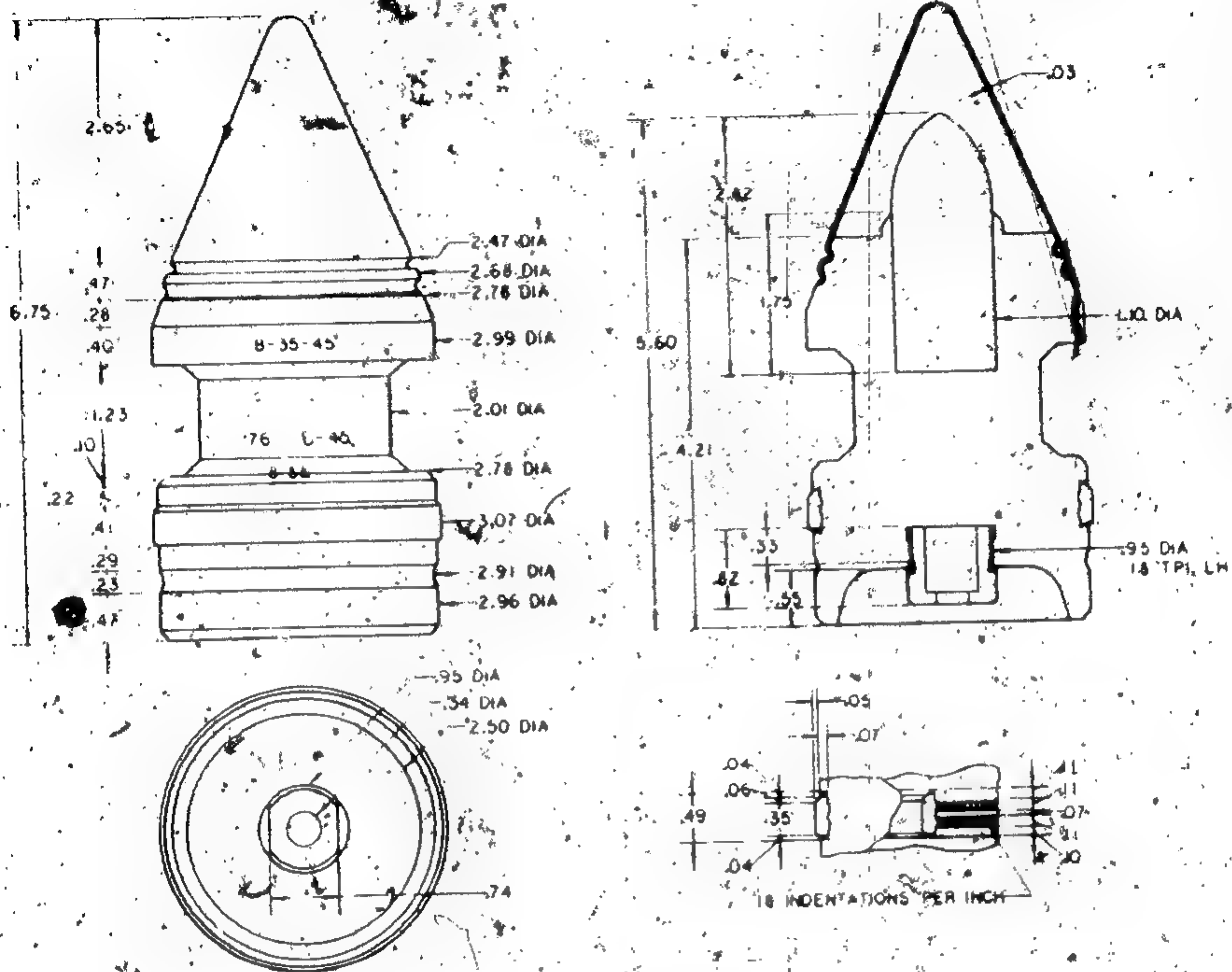
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Original

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Neg. 502851

ALL DIMENSIONS IN INCHES

Caliber ----- 76 mm  
 Identification ----- BR-354P  
 Type ----- HVAP-T  
 Weight (fuzed) ----- 6.75 lb

Known using  
 weapons -----

Field gun M1942 (ZIS-3),  
 tank gun D-56T, and SP  
 gun M1942/43 (SU-76)

Remarks -----

Weight of tungsten ca-  
 bide follow-through  
 slug is 1.05 pound.

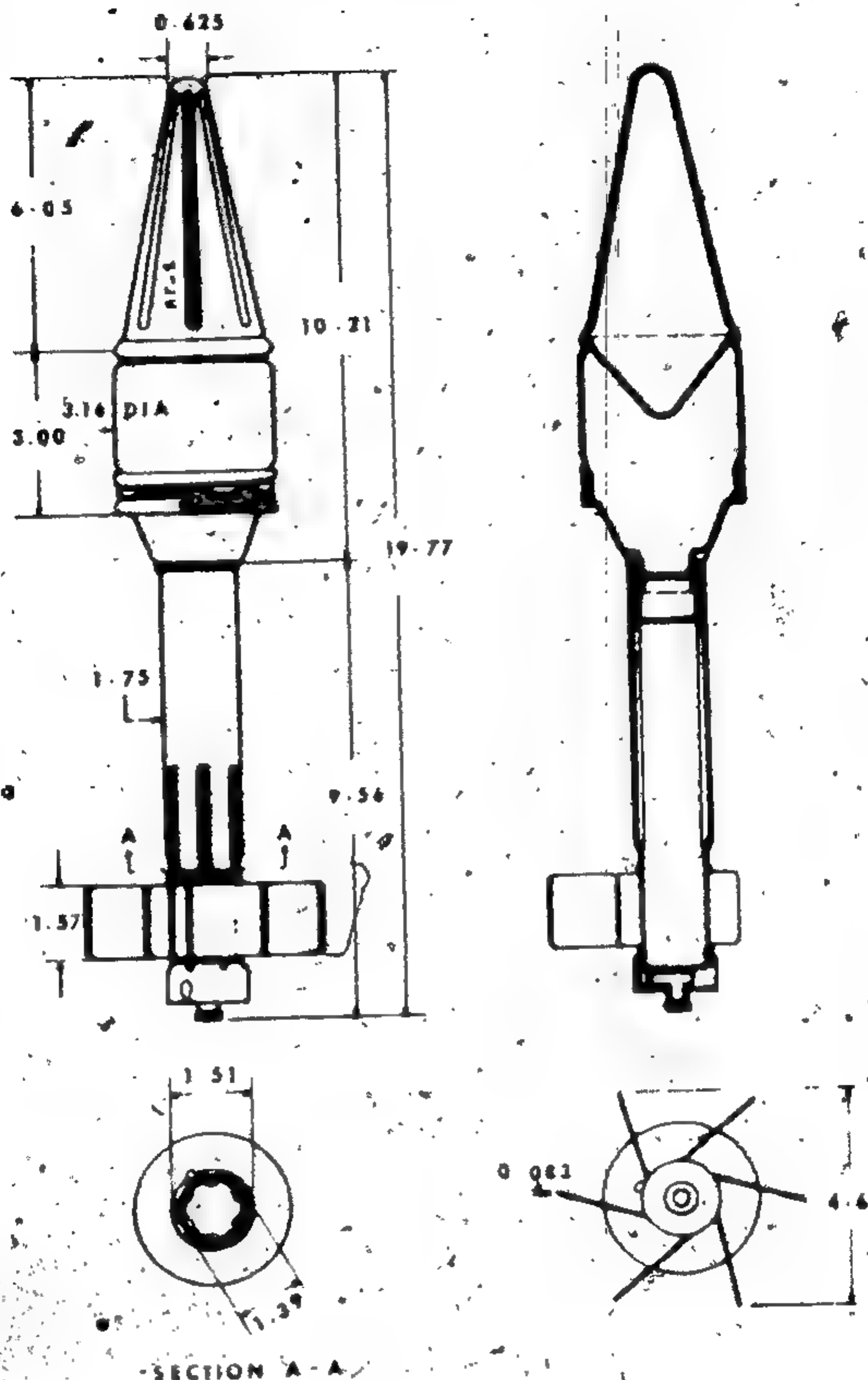
Figure 49. Soviet 76-mm HVAP-T projectile Model BR-354P (variant).

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Original



Neg. 502852

ALL DIMENSIONS IN INCHES

Caliber ----- 40/80 mm  
 Identification ----- PG-2  
 Type ----- HEAT  
 Weight (fuzed) ----- 3.57 lb  
 Bursting charge ----- 1.25 lb RDX/  
 TNT  
 Fuze ----- Model DK-2  
 base  
 detonating

Remarks ----- Although the launcher has a 40-mm bore, the projectile head has an 80-mm diameter. Also uses Model DK-4 base detonating self-destroying fuze. Copies of the grenade and launcher are manufactured in other Eurasian Communist countries.

Known using ----- Antitank grenade  
 weapon ----- launcher Model RPG-2

Figure 50. Soviet 40/80-mm HEAT projectile Model PG-2.

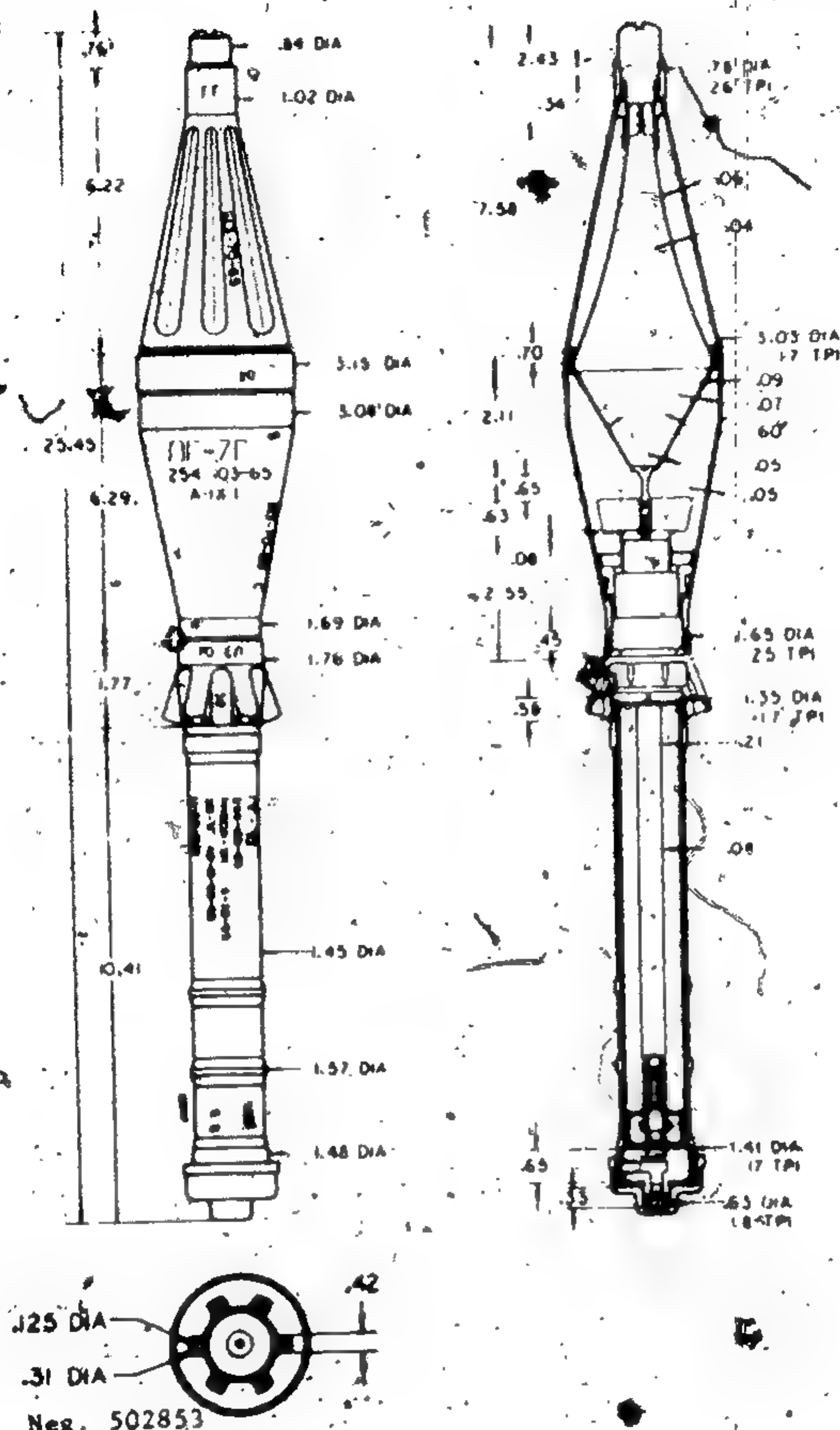
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Original

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Caliber -----	40/80 mm
Identification -----	PG-7
Type -----	HEAT
Weight (fuzed) -----	3.86 lb
Bursting charge -----	0.83 lb
	RDX/ aluminum
Fuze -----	Model VP-7
	PIBD (Piezo electric)

Known using  
weapon ---

Remarks

Antitank grenade launcher  
Model RPG-7

Projectile head is 80 mm; motor is 40 mm, which is bore diameter of launcher. Copies of the grenade and launcher are produced, in other Eurasian Communist countries.

Figure 51. Soviet 40/80-mm HEAT projectile Model PG-7.

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Technical drawings of a rocket motor, including front, side, and cross-sectional views with dimensions and labels.

**Front View (Left):**

- Top diameter: 1.565
- Top section height: .789
- Section height: 2.64
- Section height: 1.843
- Section height: 2.358
- Section height: 1.568
- Section height: 1.353
- Section height: 12.093
- Section height: 4.740
- Section height: 3.189
- Motor label: M-1
- Motor label: 0-832
- Motor label: 80
- Motor label: 88-40
- Motor label: 82
- Motor label: ++
- Section height: 3.202 DIA
- Section height: 1.219 DIA

**Side View (Right):**

- Top diameter: 820
- Section height: 3.100
- Section height: 1.40 DIA-10 TPI
- Section height: .34
- Section height: .38
- Section height: .34
- Section height: .863-18 TPI
- Section height: 2.826

**Cross-sectional View (Bottom Left):**

- Outer diameter: 3.235 DIA
- Inner diameter: .925 DIA
- Section height: .085
- Section height: 60

**Detail View (Bottom Right):**

- Section height: 19
- Section height: 13
- Section height: 11
- Section height: 12
- Section height: 11
- Section height: 13
- Section height: 11
- Section height: 12
- Section height: 13
- Section height: 20

Neg. 502854

ALL DIMENSIONS IN INCHES

Caliber.-----	82 mm	Fuze -----	Model M-1 point detonating
Identification --	0-832	Known using	
Type -----	Frag	weapon -----	Mortar M1937 (1942-1943
Weight (fuzed) -----	7.50 lb		version)
Bursting charge -----	0.88 lb	Remarks -----	Also uses Models M-2, M-3,
	Schneiderite		M-4, MP-82, and MP point
			detonating fuzes.

Figure 52. Soviet 82-mm frag projectile Model O-832.

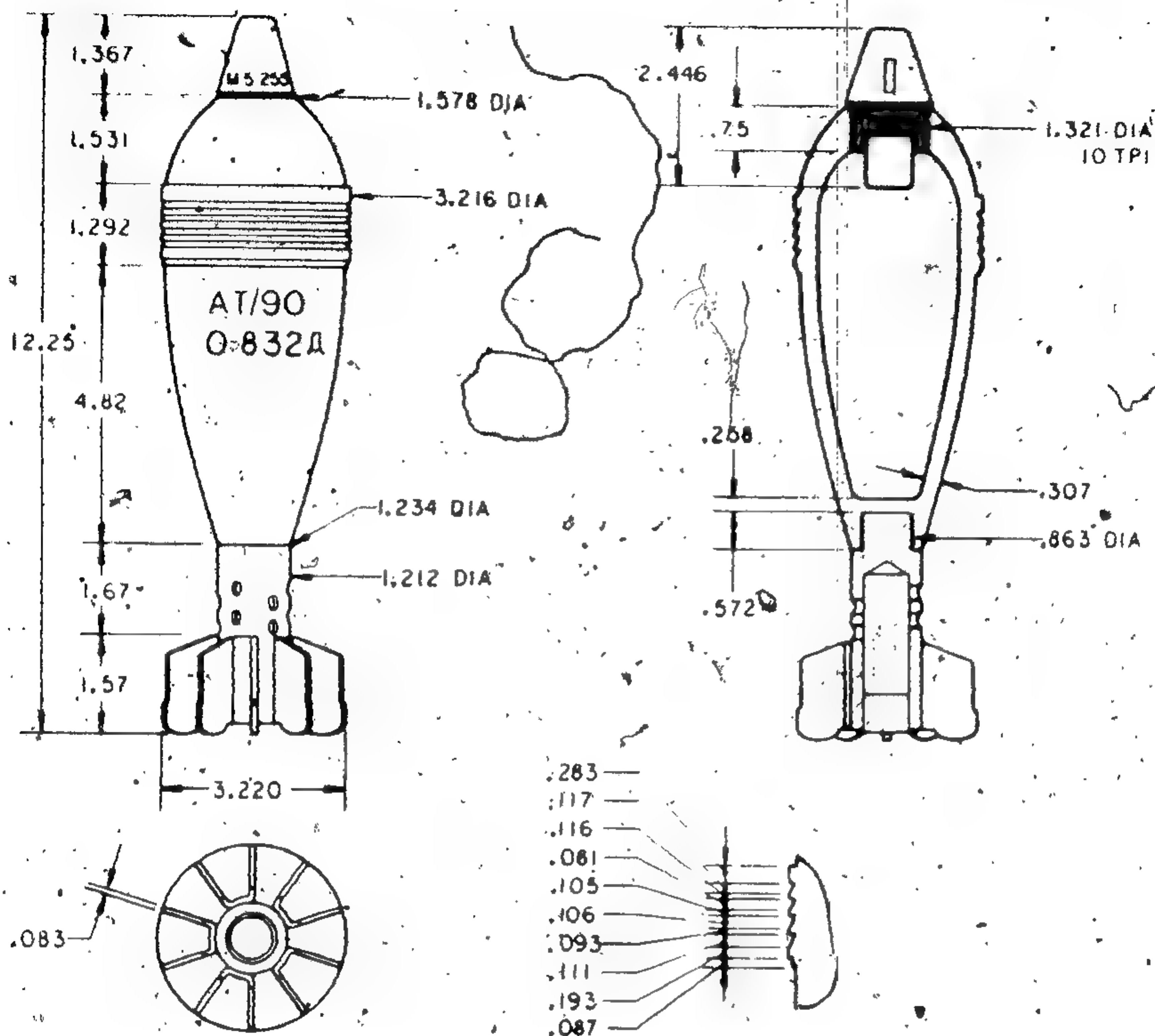
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Neg. 502855

ALL DIMENSIONS IN INCHES

Caliber	82 mm	Known using	
Identification	O-832D	weapon	Mortar M1937
Type	Frag		(1942-1943 version)
Weight (fuzed)	6.77 lb		
Bursting charge	0.91 lb	Remarks	Also uses Models M-1, M-2, M-3, M-4, MP-82, and M-6 point detonating fuzes.
Fuze	Model M-5 point detonating		

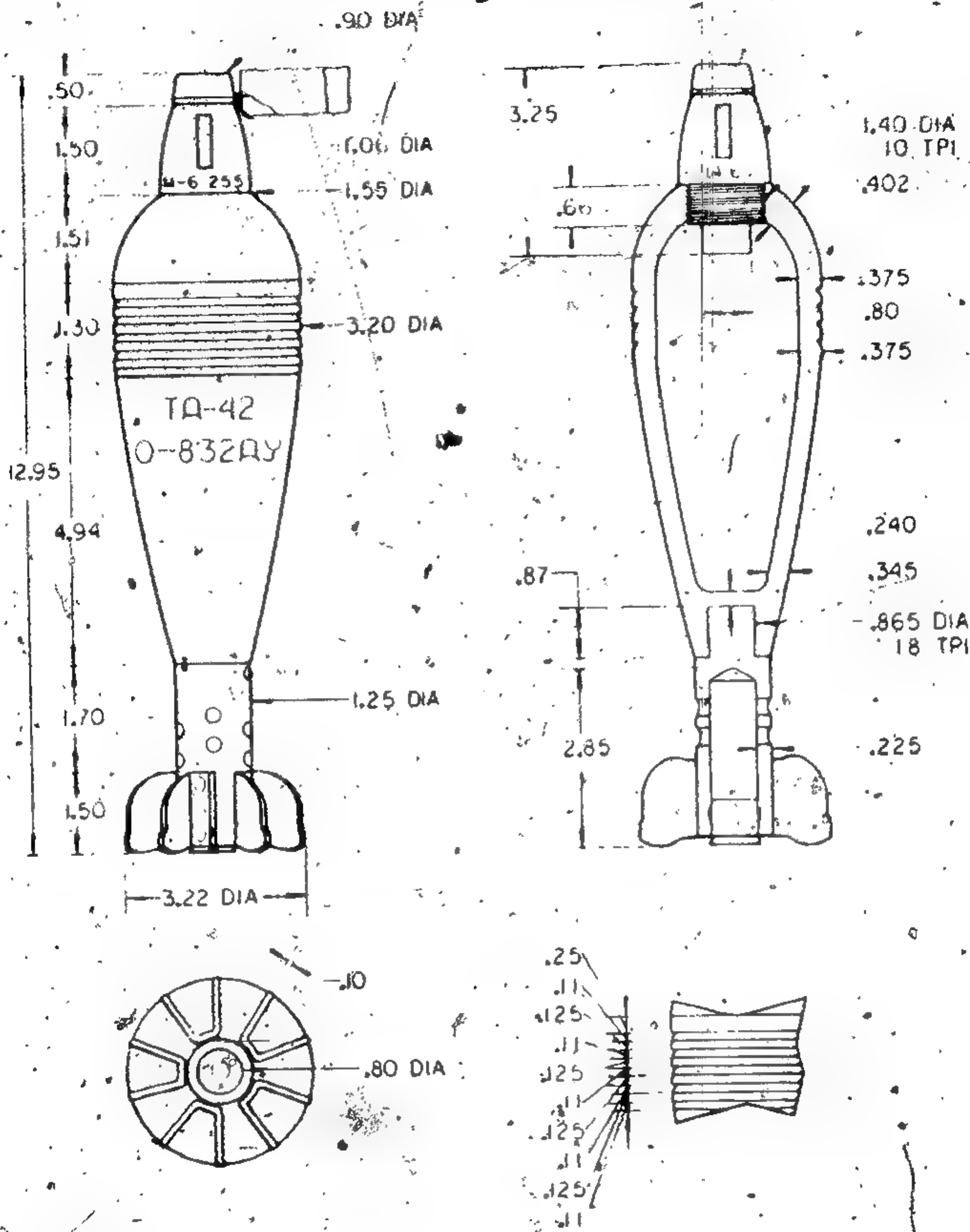
Figure 53. Soviet 82-mm frag projectile Model O-832D.

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Neg. 502856

ALL DIMENSIONS IN INCHES

Caliber ----- 82 mm  
 Identification ----- O-832 DU  
 Type ----- Frag  
 Weight (fuzed) ----- 7.12 lb  
 Bursting charge ----- 0.96 lb  
 TNT/dinitronaphthaline

Fuze ----- Model M-6 point  
 detonating  
 Known using -----  
 weapon ----- Mortar M1937 (1942-  
 1943 version)  
 Remarks ----- Also uses Models M-1,  
 M-2, M-3, M-4, M-5,  
 and MP-82 fuzes.

Figure 54. Soviet 82-mm frag projectile Model O-832 DU.

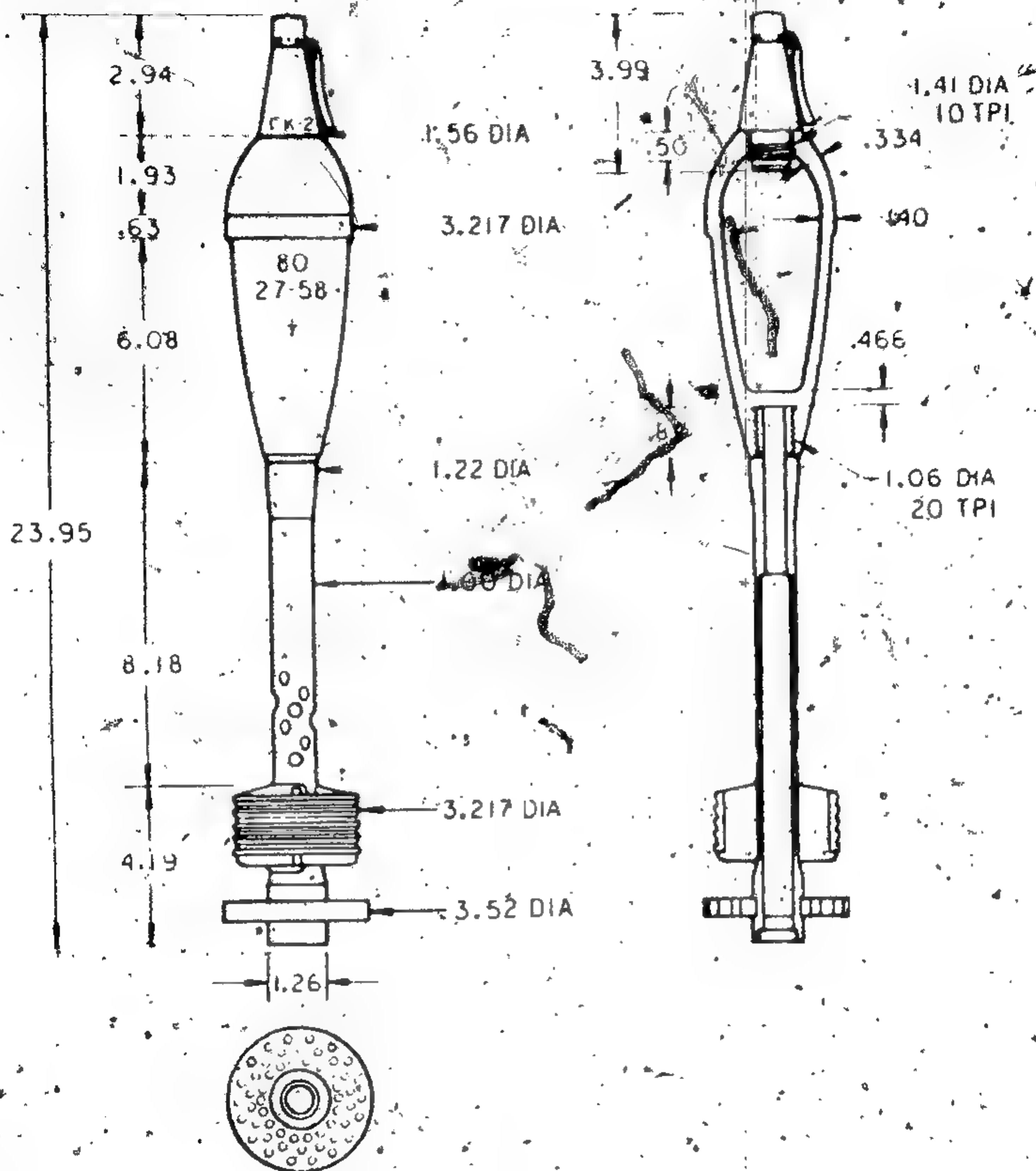
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Original

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Neg. 502857

ALL DIMENSIONS IN INCHES

Caliber	82 mm	Fuze	Model GK-2 point
Identification	O-881A		detonating
Type	Frag	Known using	
Weight (fuzed)	8.58 lb	weapon	Recoilless gun B-10
Bursting charge	1.025 lb TNT/ dinitronaphthalene		

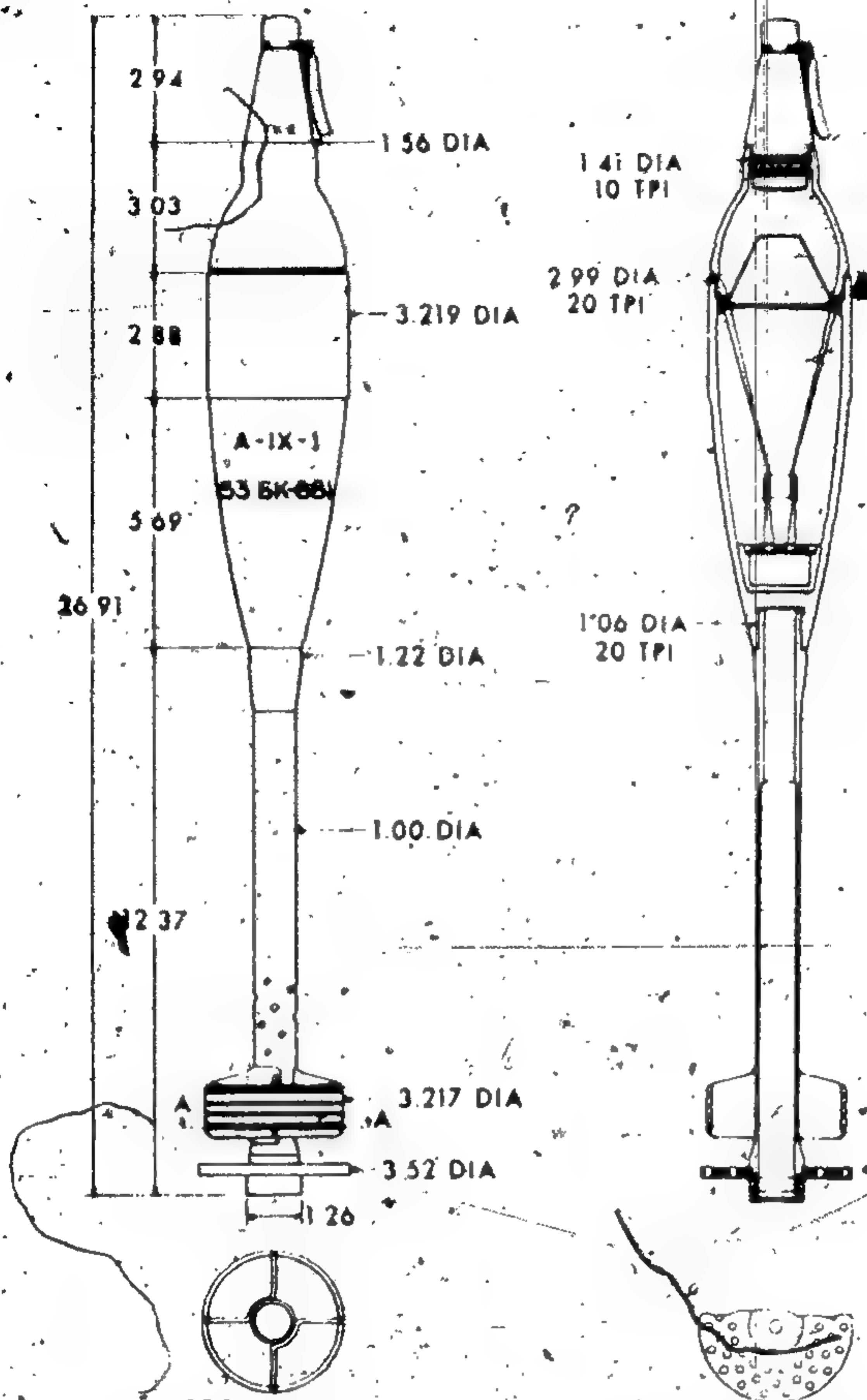
Figure 55. Soviet 82-mm frag projectile Model O-881A.

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Original



SECTION A-A

Neg. 502858

ALL DIMENSIONS IN INCHES

Caliber ----- 82 mm  
Identification ----- BK-881  
Type ----- HEAT  
Weight (fuzed) ----- 8.53 lb

Bursting charge ----- 1.02 lb RDX  
Fuze ----- Model GK-2 PIBD  
Known using ----- Recoilless gun  
weapon ----- B-10

Figure 56. Soviet 82-mm HEAT projectile Model BK-881.

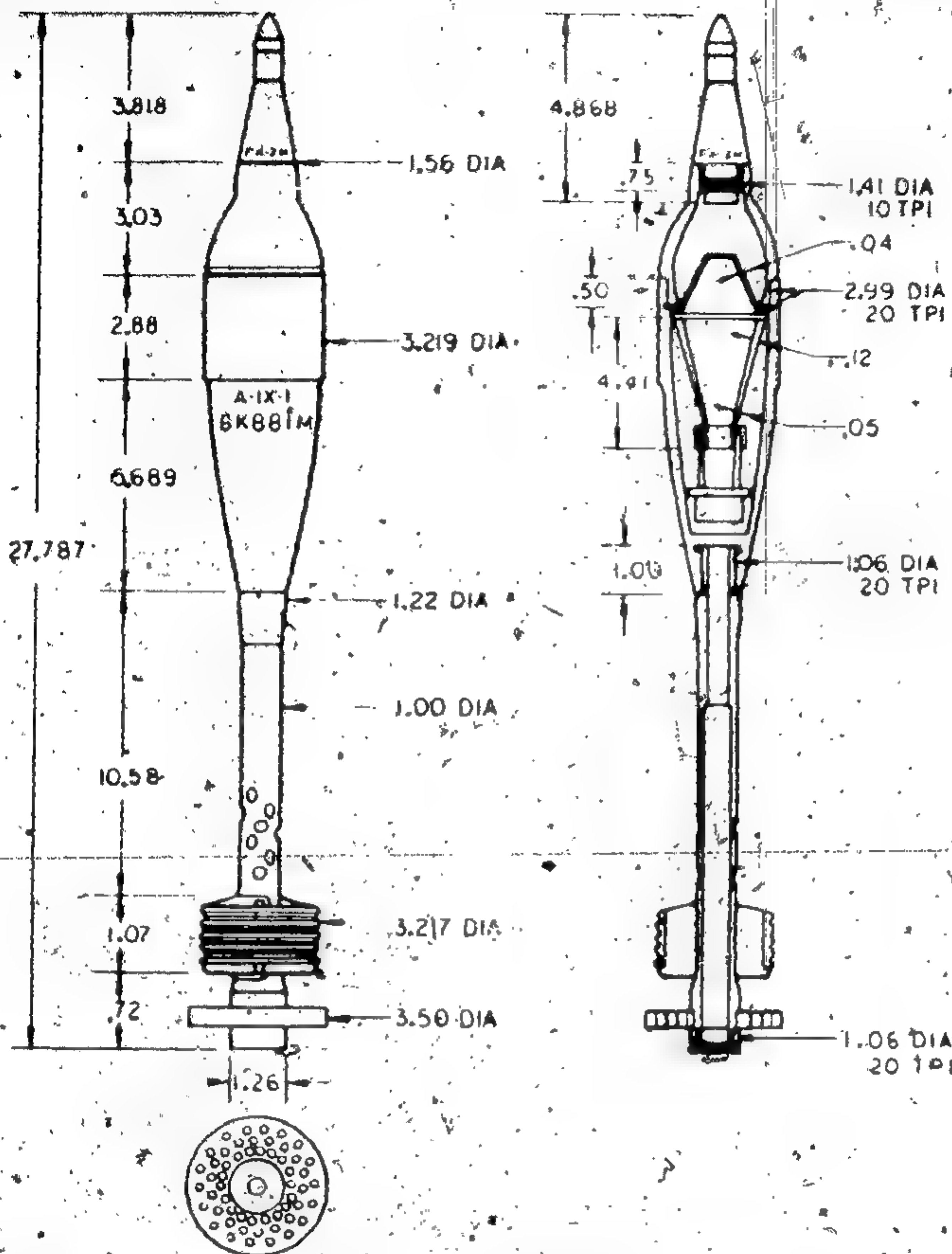
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Neg. 502859

ALL DIMENSIONS IN INCHES

Caliber	82 mm	Bursting charge	1.20 lb RDX
Identification	BK-881M	Fuze	Model GK-2M
Type	HEAT		PIBD
Weight (fuzed)	9.05 lb	Known using weapon	Recoilless gun B-10

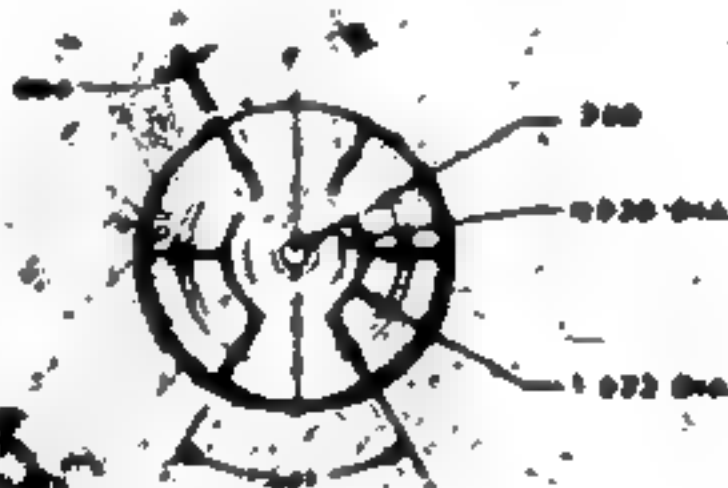
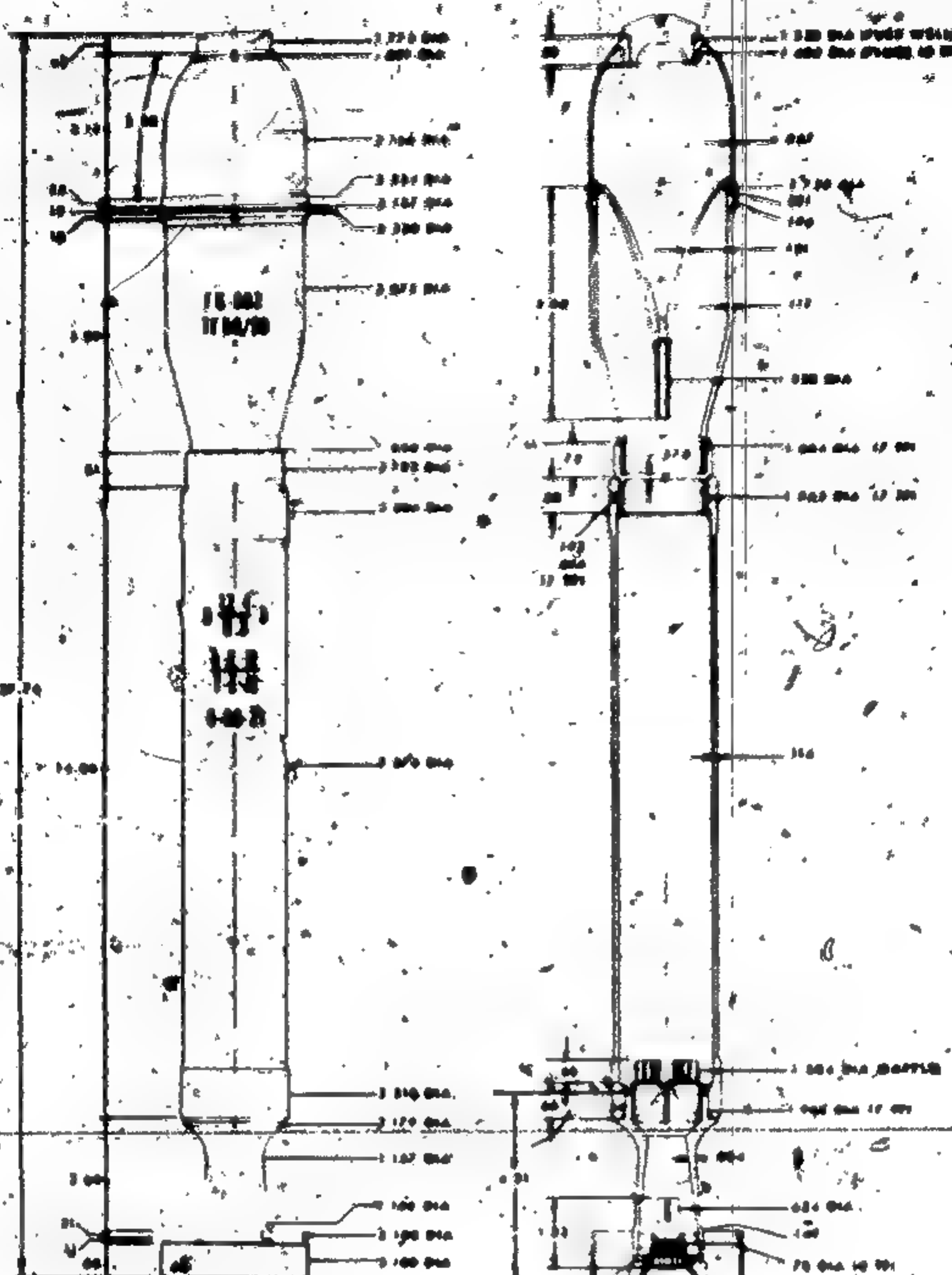
Figure 57. Soviet 82-mm HEAT projectile Model BK-881M.

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**Original**



Ref: 502860

Caliber	82 mm	Fuze	Model GK-1 PIBD
Identification	PG-82	Known using	
Type	HEAT	weapon	AT rocket launcher
Weight (fuzed)	10.06 lb		SPG-82
Bursting charge	1.49 lb RDX/TNT	Remarks	Projectile shown with nose plug in lieu of fuze.

Figure 57a. Soviet 82-mm HEAT projectile Model PG-82.

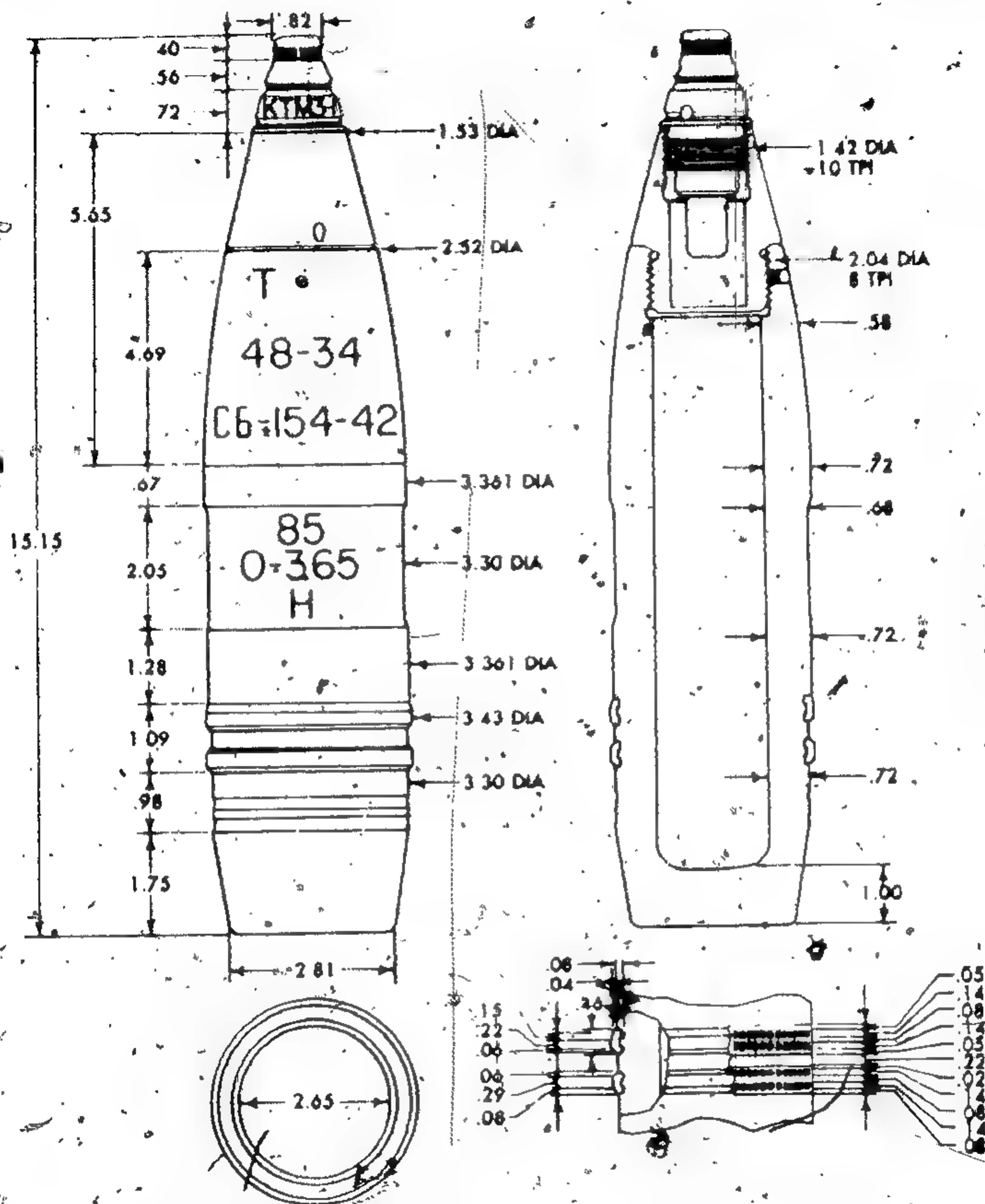
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Original.

ST-CW-07-29-76



Neg. 502861 ALL DIMENSIONS IN INCHES

18 INDENTATIONS PER INCH

Caliber ----- 85 mm  
 Identification ----- O-365  
 (two-piece)  
 Type ----- Frag  
 Weight (fuzed) ----- 21.11 lb  
 Bursting charge ----- 1.71 lb TNT

Fuze ----- Model KTMZ-1 point  
 detonating  
 Known using -----  
 weapons ----- AA guns KS-12 &  
 KS-12A, tank gun M1944  
 (ZIS-S53), SP guns  
 M1943 (D5-S85 and  
 D5-S85A), field gun  
 D-44, and auxiliary-  
 propelled AT-gun SD-44

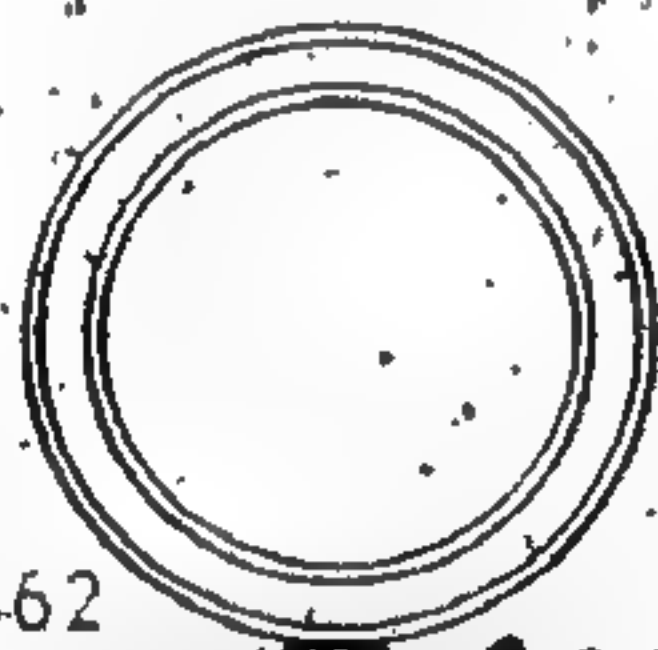
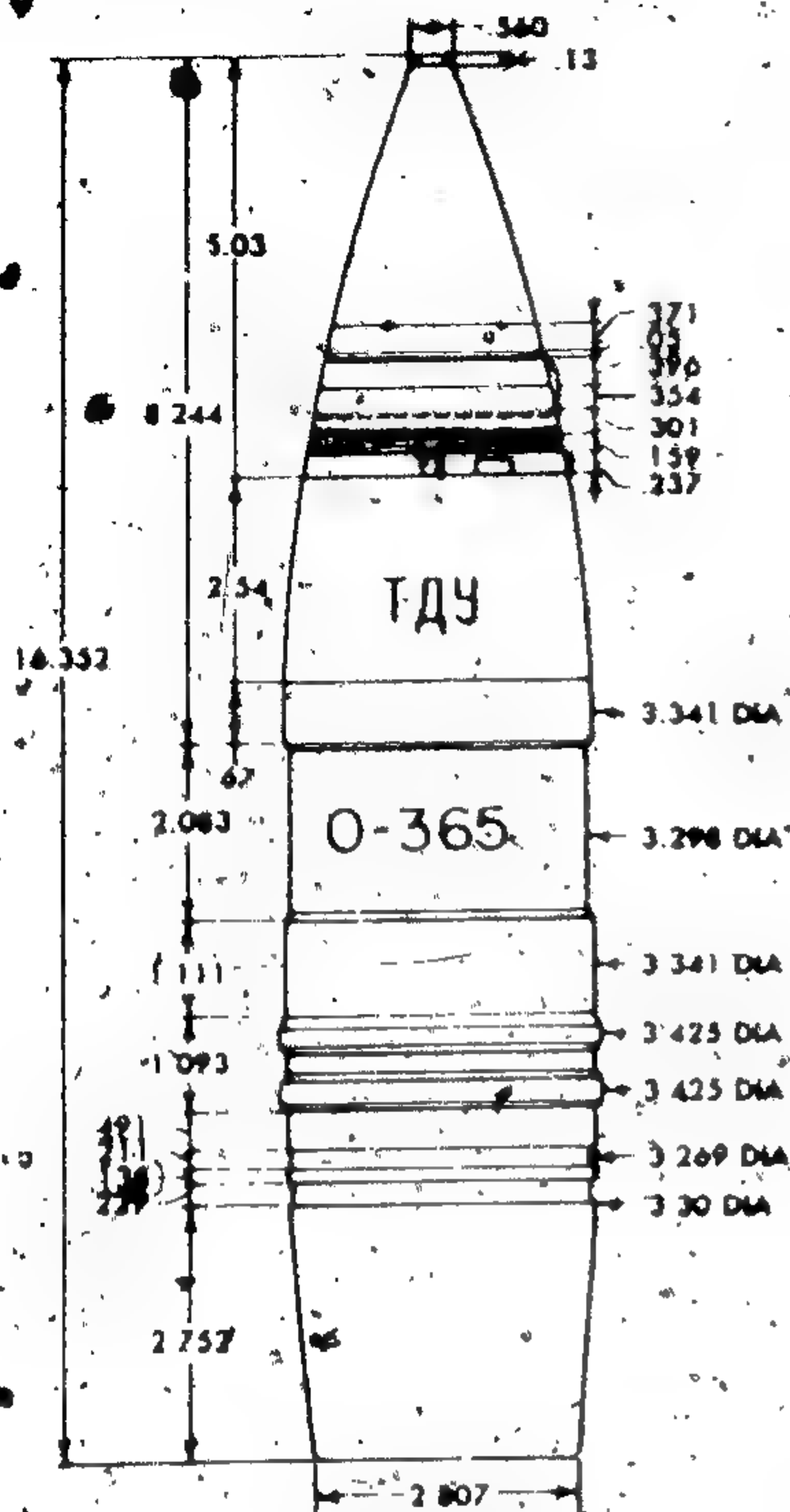
Figure 58. Soviet 85-mm frag projectile Model O-365 (two-piece).

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Original



Neg: 502862

ALL DIMENSIONS IN INCHES

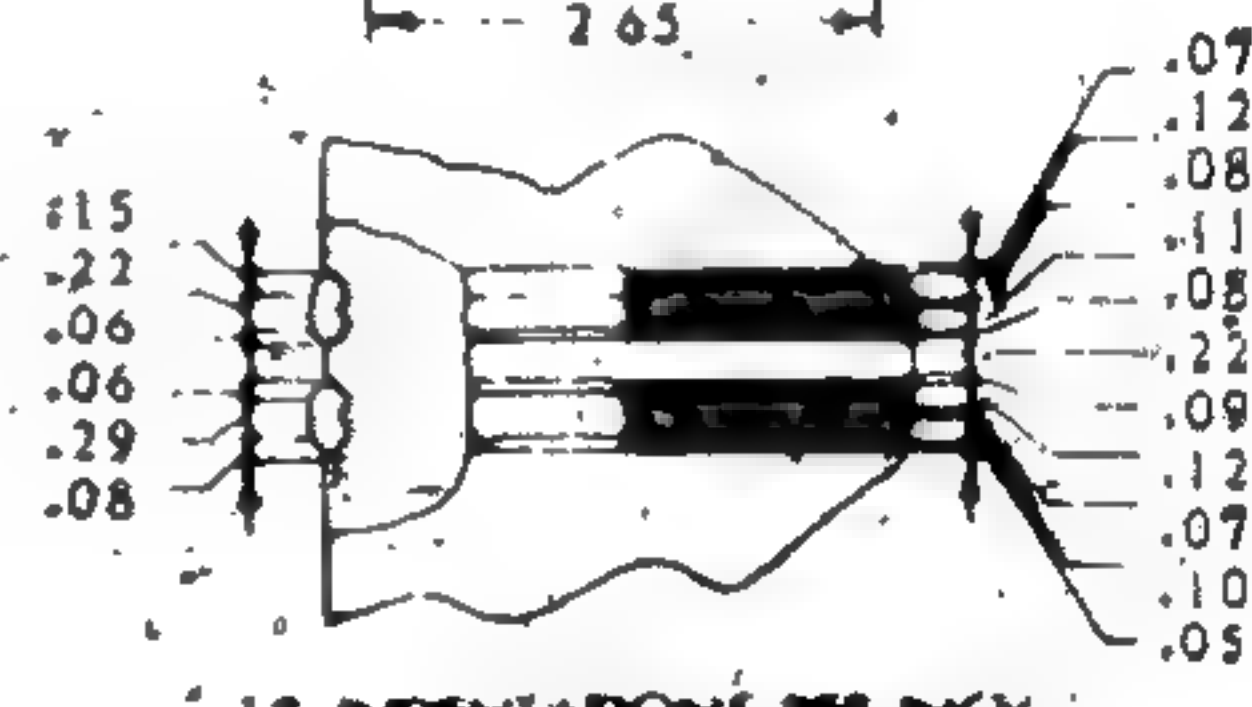
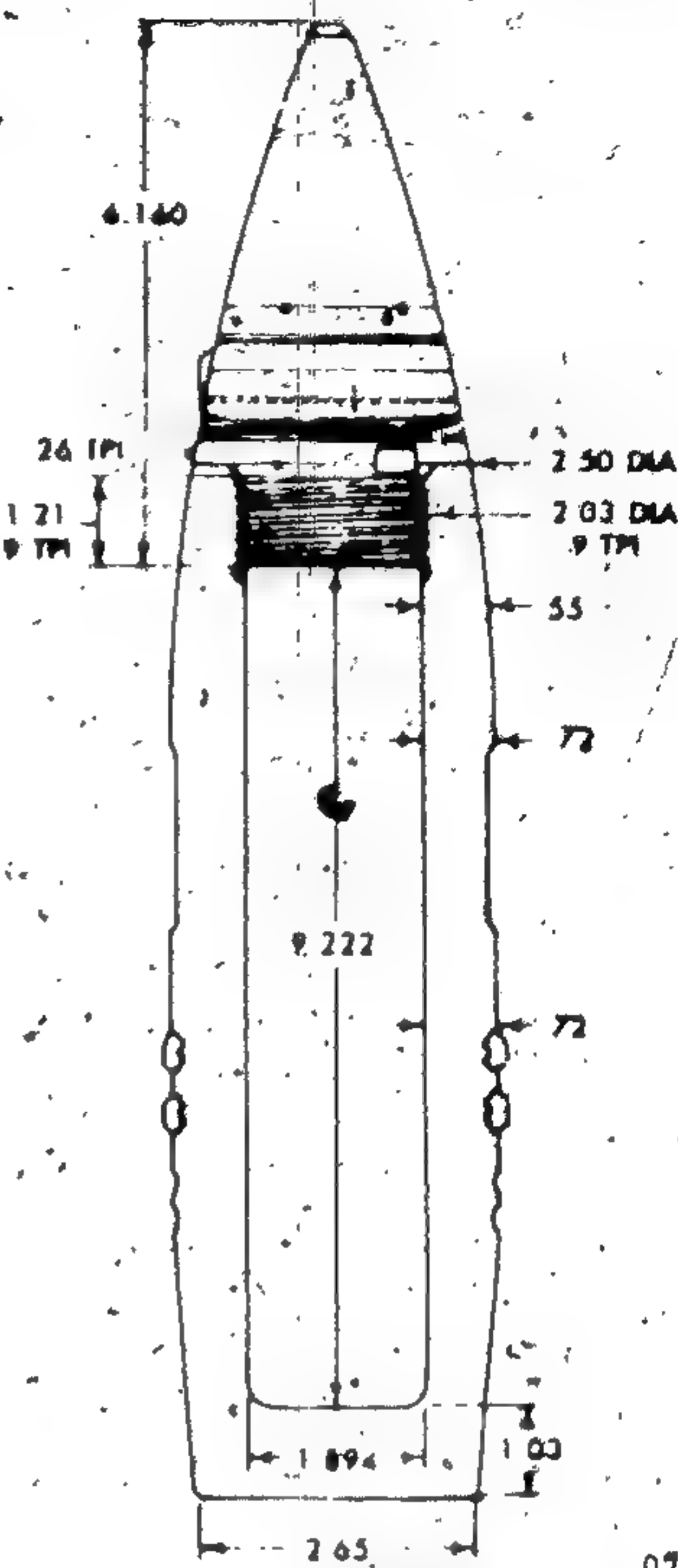
Caliber ----- 85 mm  
 Identification ----- O-365  
 Type ----- Frag  
 Weight (fuzed) ----- 20.3 lb  
 Bursting charge ----- 1.42 lb TNT  
 Fuze ----- Model T-5  
 time fuze

Known using weapons ----- AA guns KS-12,  
 and KS-12A,  
 tank gun

(Continued)

Remarks

M1944 (ZIS-S53),  
 SP gun M1943  
 (D5-S85 and D5-  
 S85A), field gun,  
 D-44, and auxiliary-  
 propelled AT gun SD-44  
 A black band about 1.5  
 inches wide appears on  
 the nose of the Model T-5  
 fuze and its shipping cap  
 (not shown above). Also use  
 Model T-11 time fuze.



18 INDENTATIONS PER INCH

Figure 59. Soviet 85-mm frag projectile Model O-365.

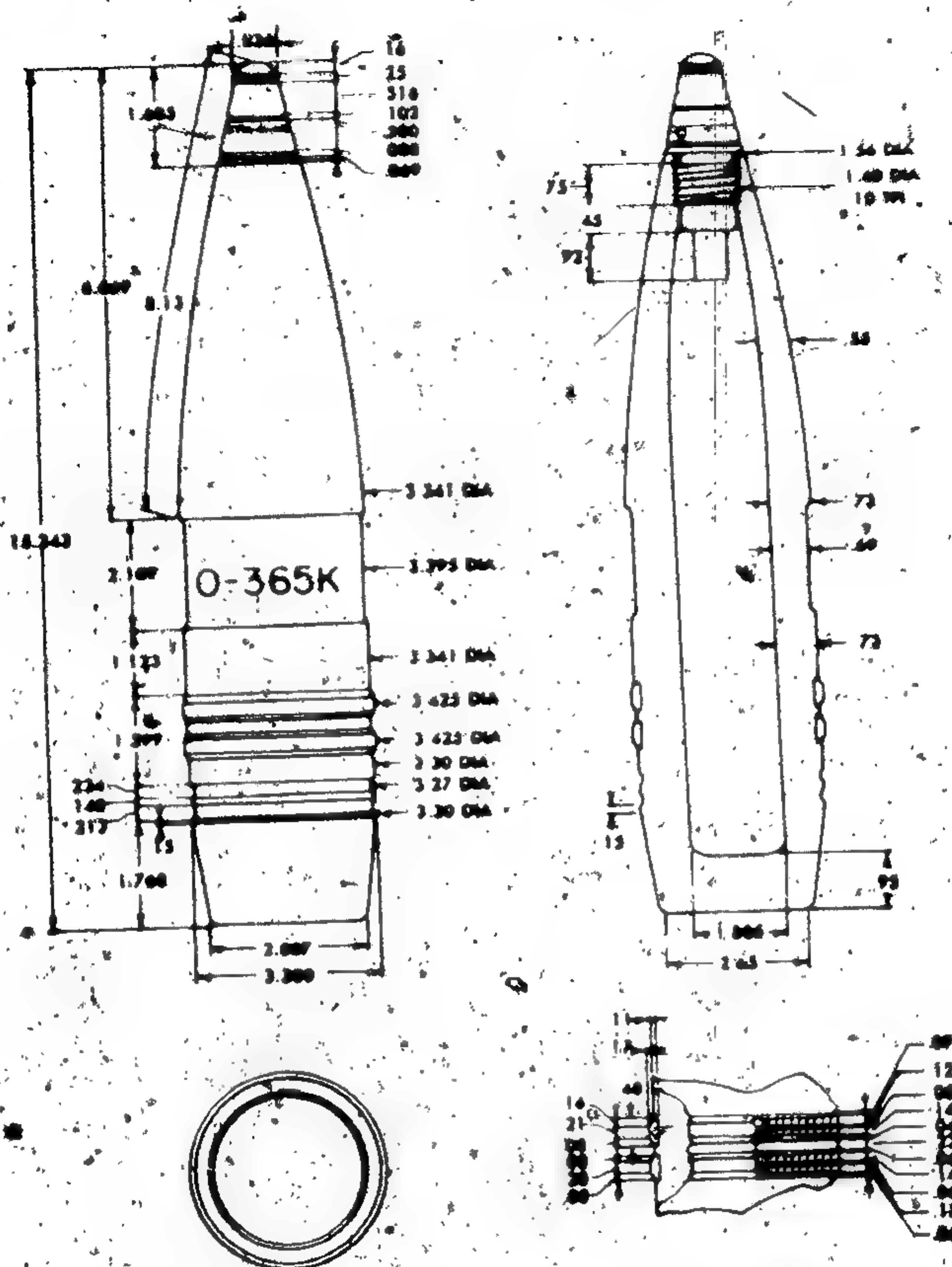
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Original

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Neg. 502863

ALL DIMENSIONS IN INCHES

18 INDENTATIONS PER INCH

Caliber	85 mm
Identification	O-365K
Type	Frag
Weight (fuzed)	21.2 lb
Bursting charge	1.71 lb TNT
Fuze	Model KTM-1 point detonating
Known using weapons	AA guns KS-12 and KS-12A,

(Continued)

tank gun M1944 (ZIS-S53), SP gun M1943 (D5-S85 and D5-S85A), field gun D-44, and auxiliary-propelled AT gun SD-44. A two-piece design also exists. Also uses Model KTM-1-U point detonating fuze.

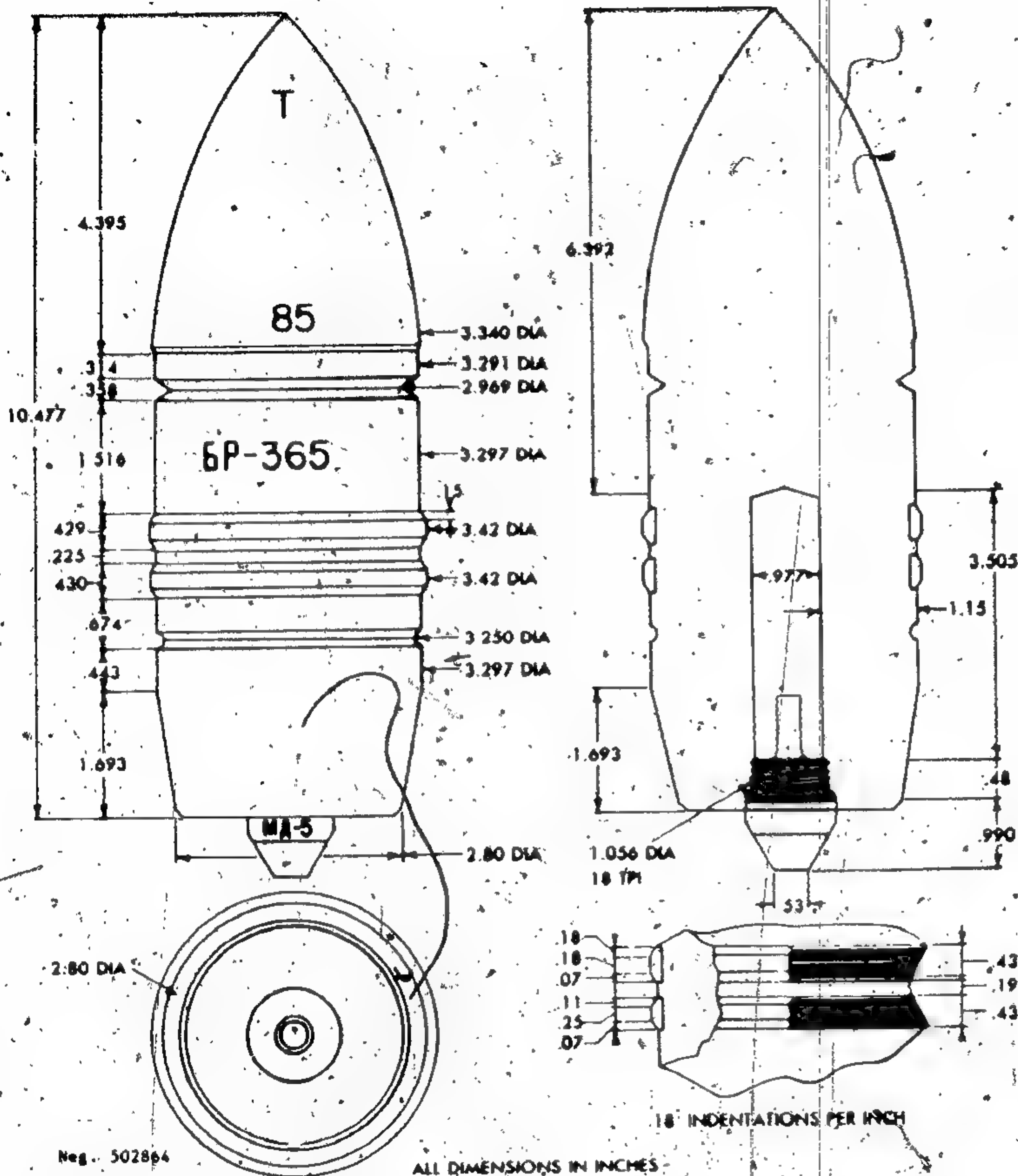
Figure 60. Soviet 85-mm frag projectile Model O-365K.

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Original



Caliber	85 mm	Known using	
Identification	BR-365	weapons	AA guns KS-12 and KS-12A
Type	AP-T		tank gun M1944 (ZIS-S53),
Weight (fuzed)	20.27 lb		SP gun M1943 (D5-S85 and
Bursting charge	0.15 lb		D5-S85A), field gun D-44,
	RDX/		and auxiliary-propelled
	aluminum		AT gun SD-44
Fuze	Model MD-5	Remarks	This projectile also uses
	base		a Model MD-8 fuze, in
	detonating		which case the projectile
			cavity is machined
			differently and has
			different dimensions.

Figure 61. Soviet 85-mm AP-T projectile Model BR-365.

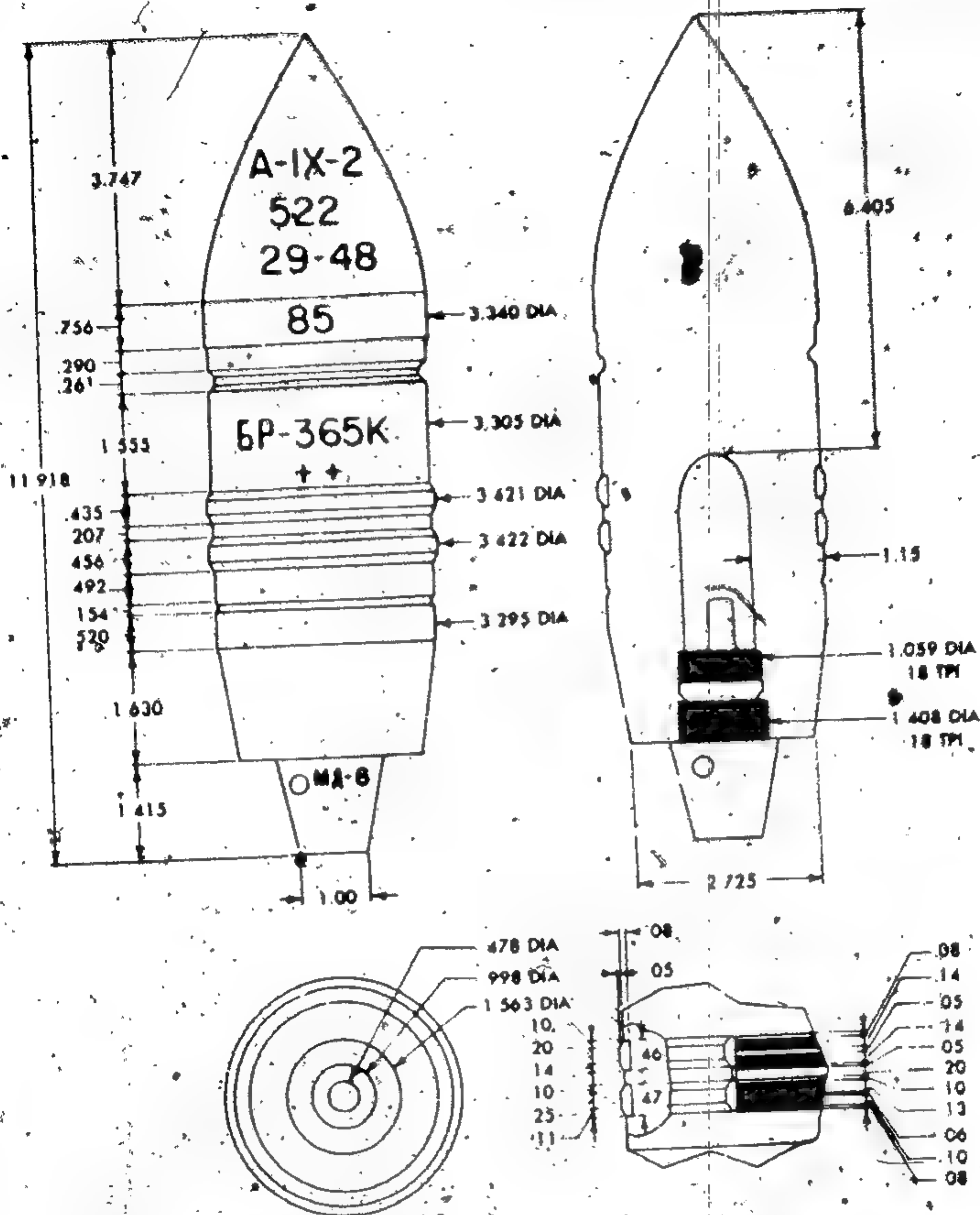
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Original



ALL DIMENSIONS IN INCHES

18 INDENTATIONS PER INCH

Caliber	85 mm
Identification	BR-365K
Type	AP-T
Weight (fuzed)	20.64 lb
Bursting charge	0.11 lb RDX/ aluminum
Fuze	Model MD-8 base detonating

Known using  
weapons

guns KS-12 and KS-12A,  
tank gun M1944 (ZIS-S53),  
SP gun M1943 (D5-S85 and  
D5-S85A), field gun D-44,  
and auxiliary-propelled  
AT gun SD-44

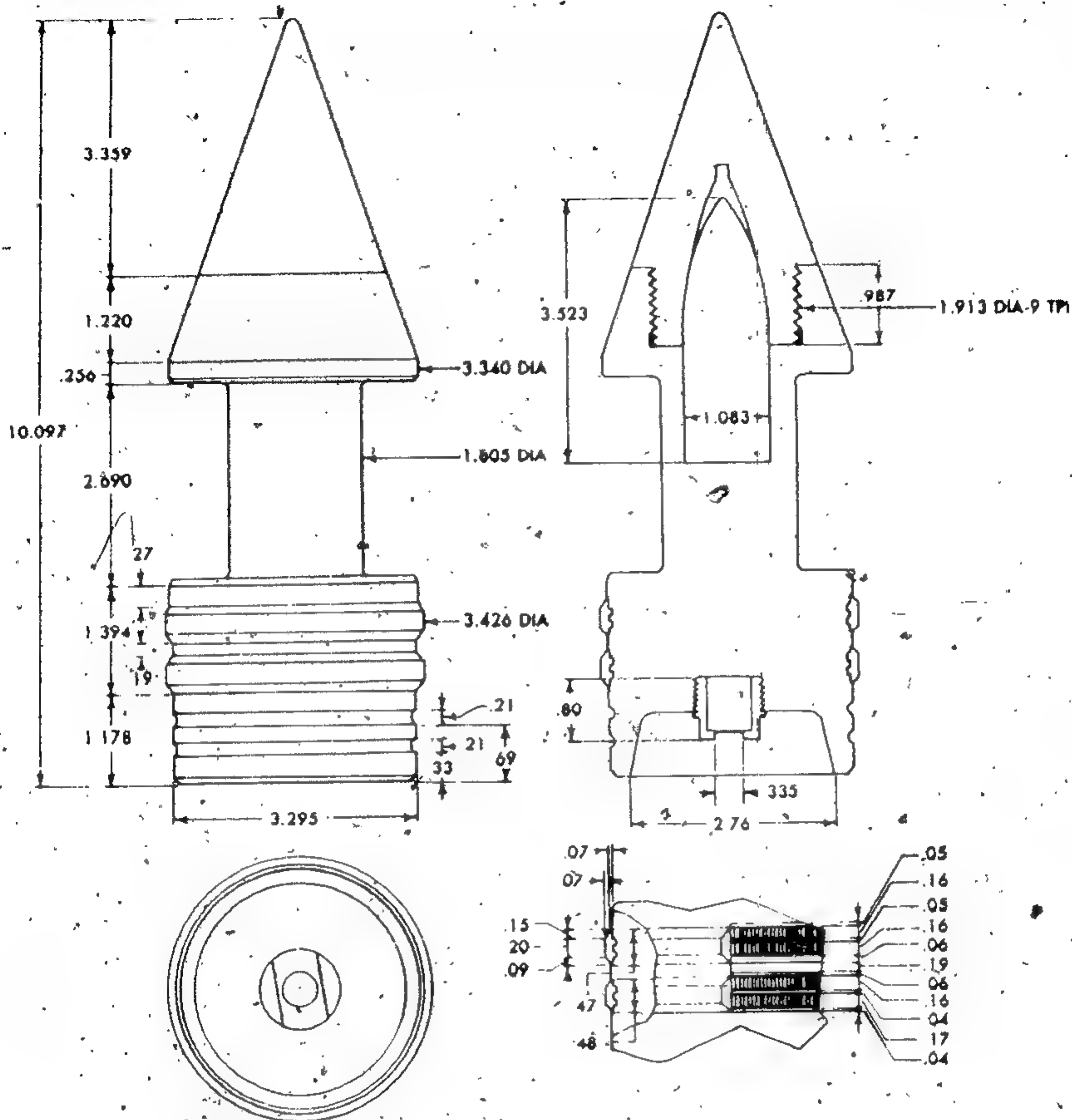
Figure 62. Soviet 85-mm AP-T projectile Model BR-365K.

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Original



Neg. 502866

ALL DIMENSIONS IN INCHES

18 INDENTATIONS PER INCH

Caliber	85 mm	Known using	
Identification	BR-365P	weapons	AA guns KS-12 and KS-12A,
Type	HVAP-T		tank gun M1944 (ZIS-S53),
Weight	10.92 lb		SP gun M1943 (D5-S85 and
			D5-S85A), field gun D-44,
			and auxiliary-propelled
			AT gun SD-44
Remarks	Weight of tungsten-carbide core is 1.375 lbs.		

Figure 63. Soviet 85-mm HVAP-T projectile Model BR-365P.

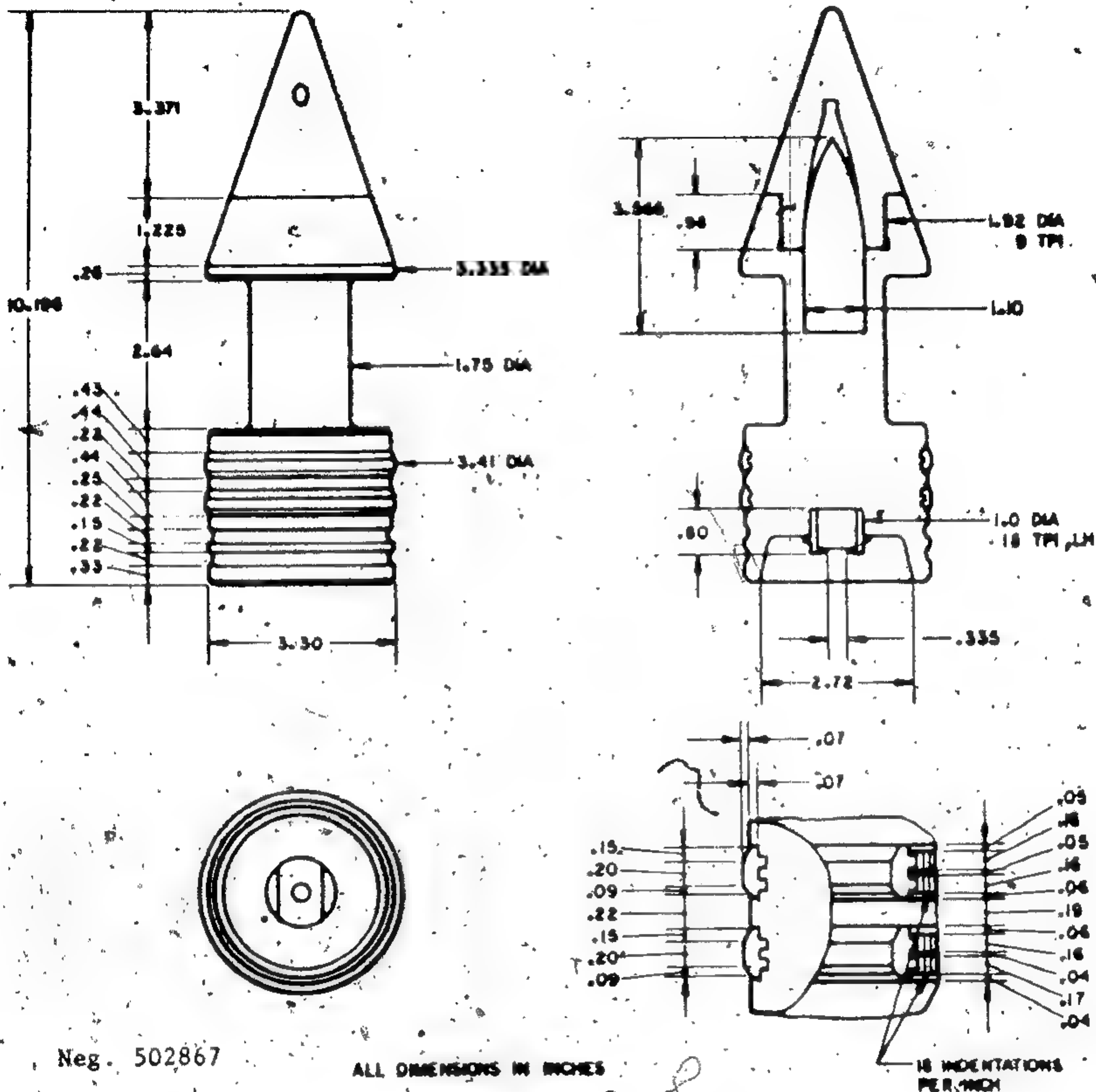
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Neg. 502867

ALL DIMENSIONS IN INCHES

Caliber ----- 85 mm  
 Identification ----- BR-365PK  
 Type ----- HVAP-T  
 Weight ----- 11.16 lb  
 Known using weapons -----

AA guns KS-12 and KS-12A, tank gun M1944 (ZIS-S53), SP gun

(Continued)

M1943 (D5-S85 and D5-S85A), field gun D-44, and auxiliary-propelled AT gun SD-44  
 Weight of tungsten carbide core is 1.43 pounds.

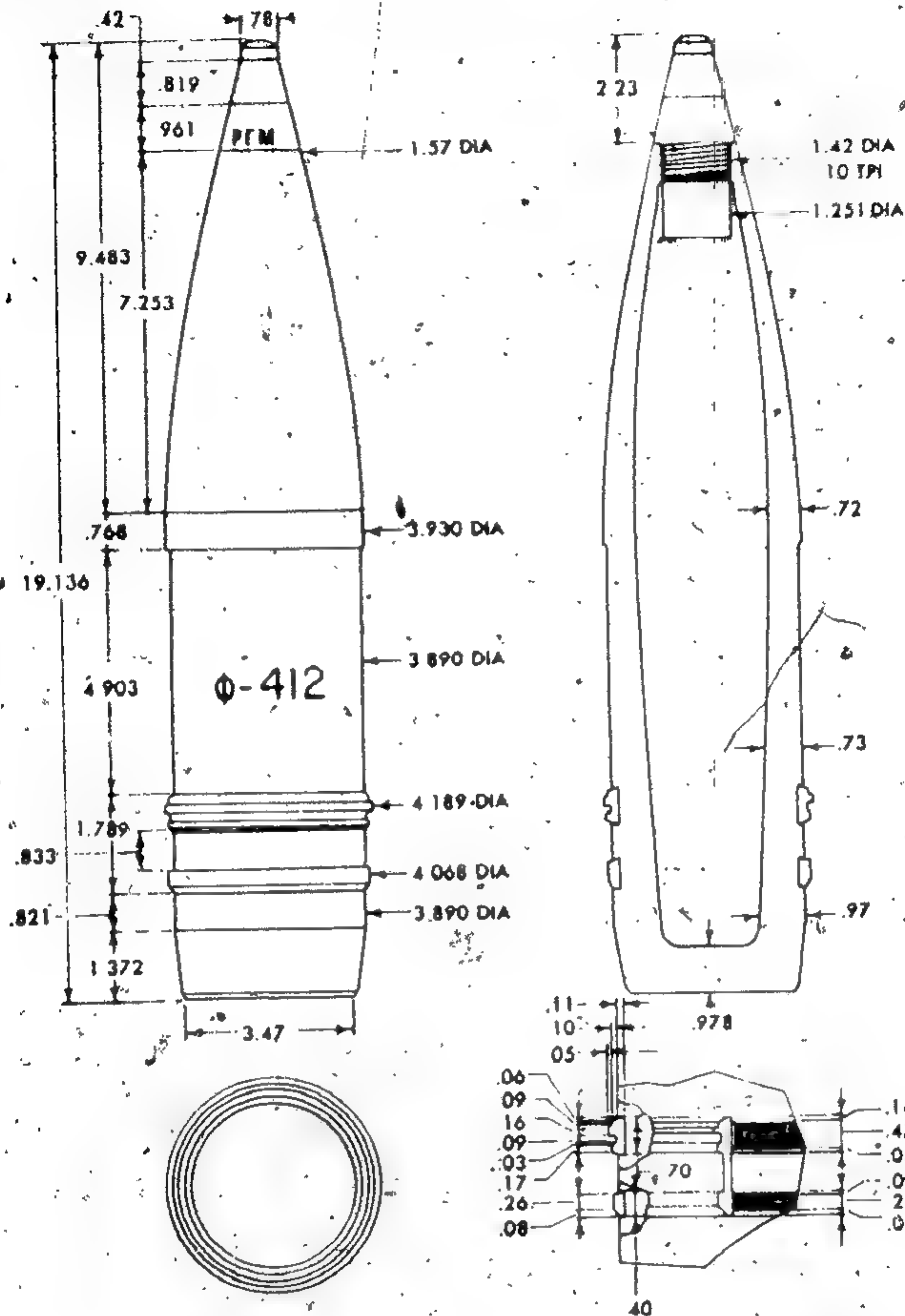
Figure 64. Soviet 85-mm HVAP-T projectile Model BR-365PK.

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Original



Neg. 502868

ALL DIMENSIONS IN INCHES

16 INDENTATIONS PER INCH

Caliber ----- 100 mm  
 Identification ----- F-412  
 Type ----- HE  
 Weight (fuzed) ----- 35.05 lb  
 Bursting charge ----- 4.76 lb TNT  
 Fuze ----- Model RGM  
 point  
 detonating

Known using  
 weapons -----

Field gun M1944 and  
 M1955; tank guns  
 D-10T, D-10TG, and D-  
 10T2S, AA gun KS-19M2,  
 and assault gun M1944

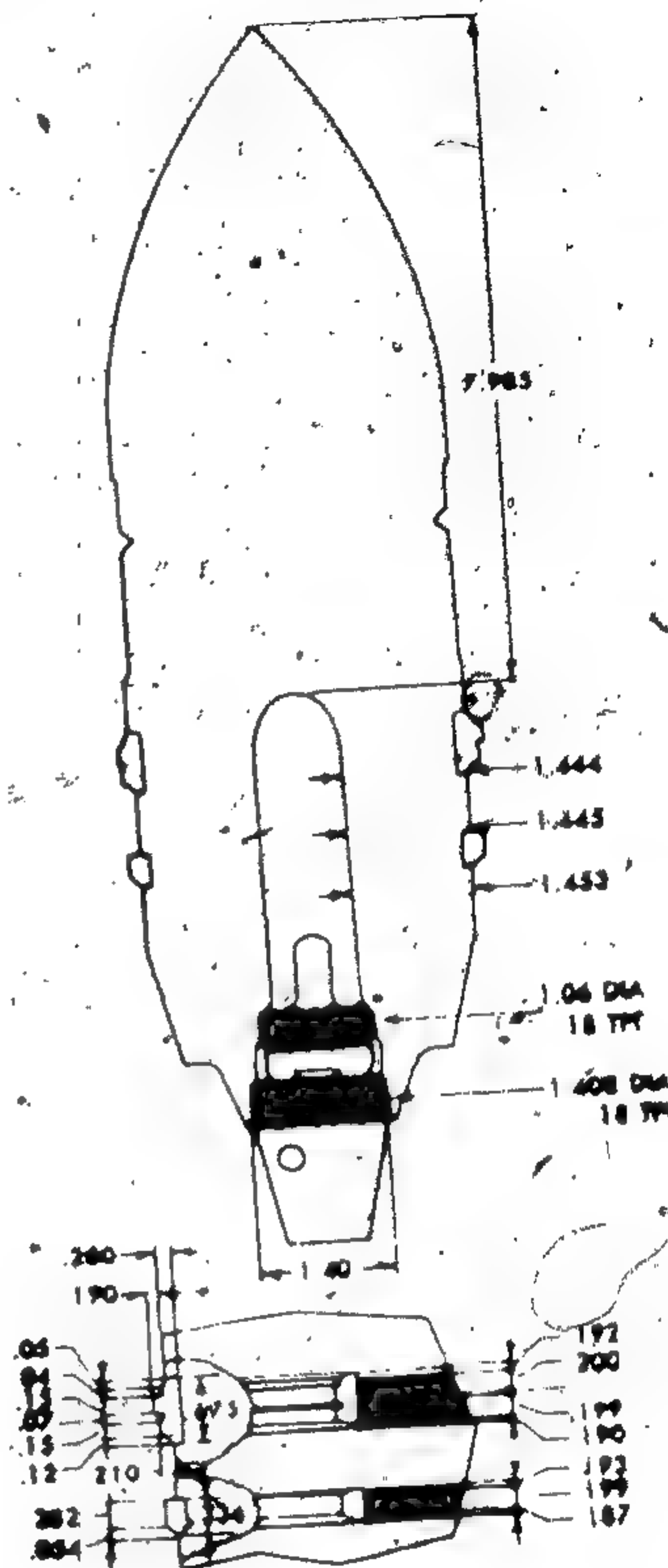
Figure 65. Soviet 100-mm HE projectile Model F-412.

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Original



Neg. 502869

• ALL DIMENSIONS IN INCHES

10 INDENTATIONS PER INCH

Caliber	100 mm
Identification	BR-412
Type	AP-T
Weight (fuzed)	34.59 lb
Bursting charge	0.124 lb
	RDX/ aluminum
Fuze	Model MD-8

Known using  
weapons —

Field gun M1944 and  
M1955, tank guns D-10T,  
D-10TG, and D-10T2S, AA  
gun KS-19M2, and assault  
gun M1944

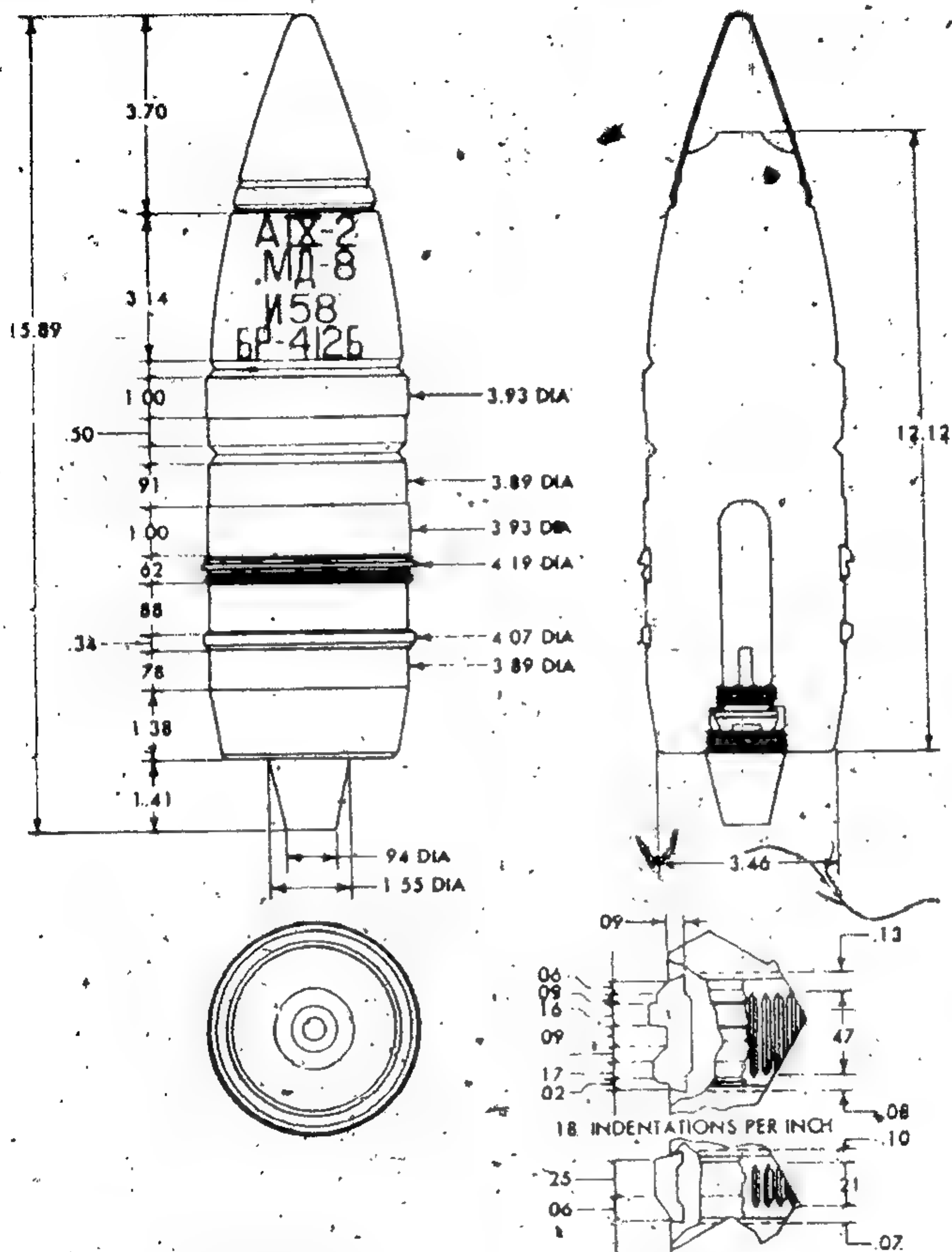
Figure 66. Soviet 100-mm AP-T projectile Model BR-412.

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Original



Neg. 502870

ALL DIMENSIONS IN INCHES

Caliber ----- 100 mm

Identification ----- BR-412B

Type ----- AP-T

Weight (fuzed) ----- 35.0 lb

Bursting charge ----- 0.124 lb  
RDX/  
aluminum

Fuze ----- Model MD-8 base  
detonating

Known using  
weapons -----

Field gun M1944 and  
M1955, tank guns  
D-10T, D-10TC, and  
D-10T2S, AA gun KS-  
19M2, and assault  
gun M1944

Also uses Model DBR-2  
base detonating fuze.

Figure 67. Soviet 100-mm AP-T projectile Model BR-412B.

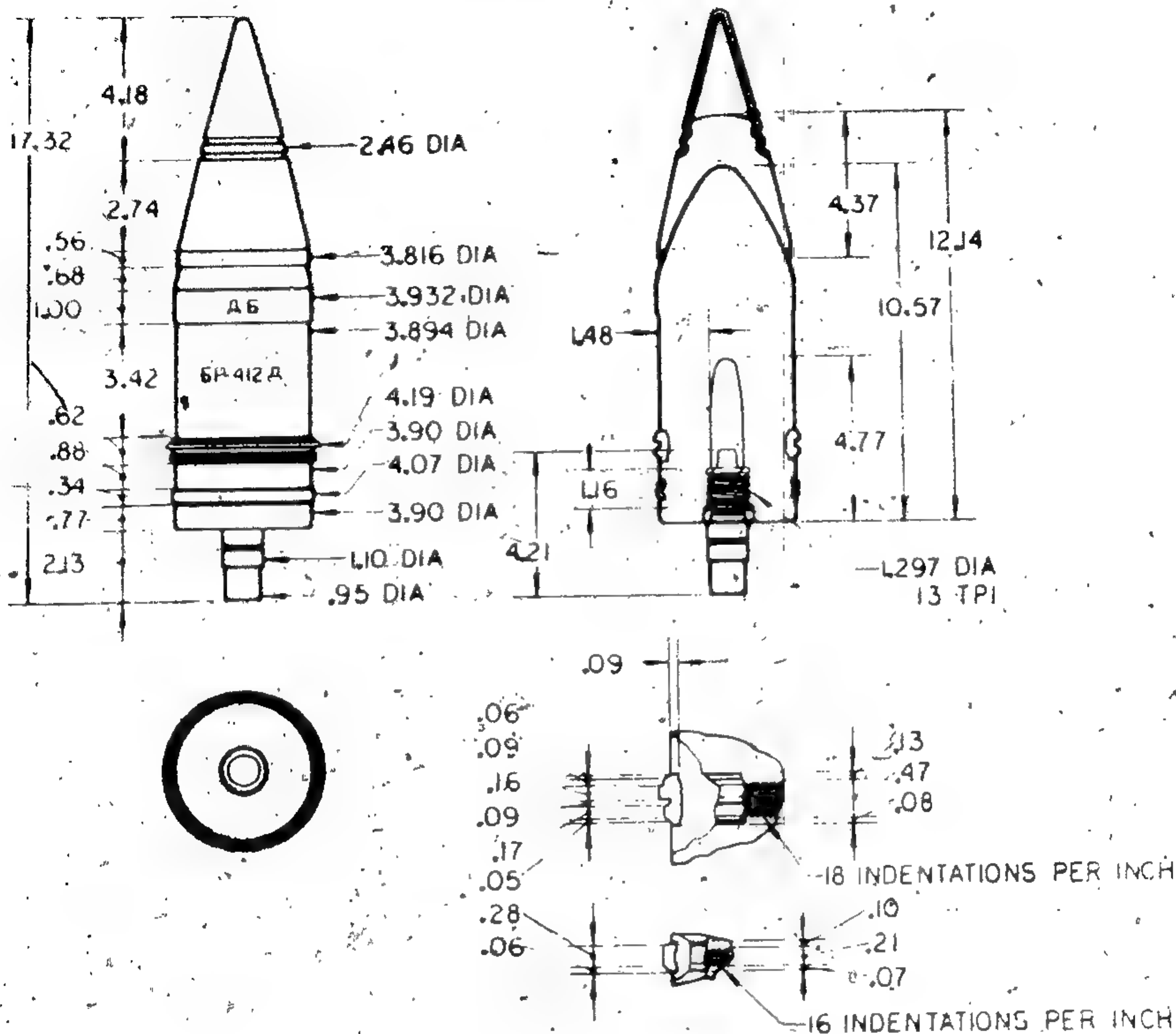
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# UNCLASSIFIED

Original

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Neg. 502871

ALL DIMENSIONS IN INCHES

Caliber ----- 100 mm  
 Identification ----- BR-412D  
 Type ----- APC-T  
 Weight (fuzed) ----- 35.25 lb  
 Bursting charge ----- 0.14 lb  
 Fuze ----- Model DBR-2  
 base  
 detonating

Known using

weapons ----- Field gun M1944 and M1955,  
 tank guns D-10T, D-10TC,  
 and D-10T2S, AA gun KS-  
 19M2, and assault gun M1944

Remarks -----

Also uses Model MD-8 base  
 detonating fuze. A variation  
 of this projectile exists.

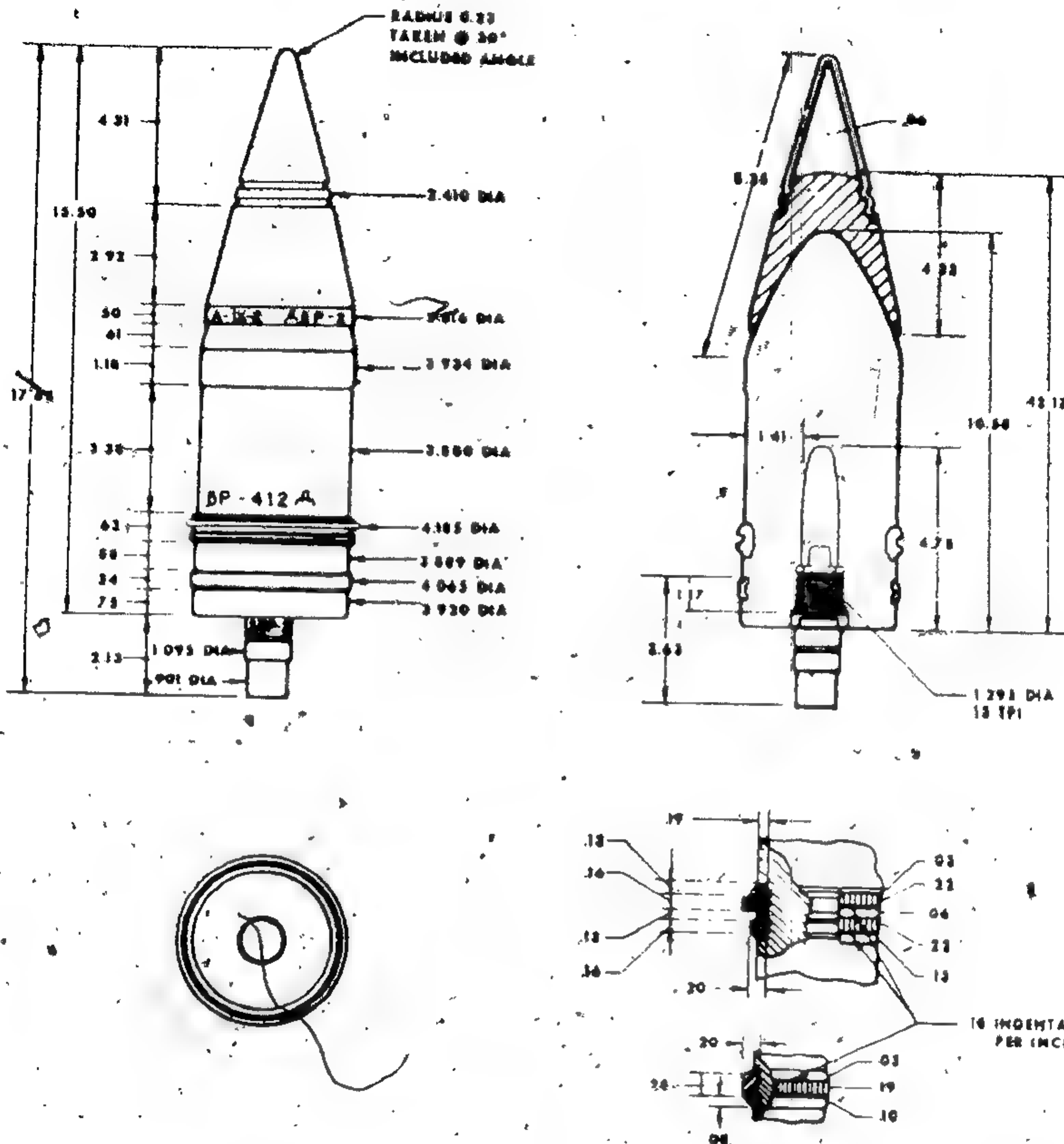
Figure 68. Soviet 100-mm APC-T projectile Model BR-412D.

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Original



Neg. 502872

## DIMENSIONS IN INCHES

Caliber	100 mm	Known using	
Identification	BR-412D	weapons	Field guns M1944 and M1955, tank guns D-10T, D-10TG, and D-10T2S, AA gun KS-19M2; and assault gun M1944
Type	APC-T	Remarks	The MD-8 base detonating fuze is also used. This projectile, with exception of the rotating band seat, is a variation of figure 68.
Weight (fuzed)	34.82 lb.		
Bursting charge	0.14 lb (est). RDX/aluminum		
Fuze	Model DBR-2 base detonating		

Figure 68a. Soviet 100-mm APC-T projectile Model BR-412D (variant).

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Technical drawing of a rocket motor assembly, showing three views: a side elevation, a top view, and a cross-section.

**Side Elevation (Left):**

- Overall length: 7.20
- Nozzle diameter: 1.57 DIA
- Base diameter: 3.94 DIA
- Internal diameter: 3.90 DIA
- Mounting flange diameter: 4.05 DIA
- Mounting flange thickness: 4.19 DIA
- Mounting flange hole diameter: 4.05 DIA
- Mounting flange hole spacing: 3.90 DIA
- Mounting flange hole diameter: 4.05 DIA
- Mounting flange hole spacing: 3.90 DIA
- Mounting flange hole diameter: 3.42 DIA
- Mounting flange hole spacing: 9.35

**Top View (Right):**

- Overall diameter: 4.05 DIA
- Central hole diameter: 1.42 DIA
- Central hole spacing: 4.05 DIA
- Central hole diameter: 3.90 DIA
- Central hole spacing: 4.05 DIA
- Central hole diameter: 3.42 DIA
- Central hole spacing: 9.35

**Cross-section (Bottom):**

- Overall diameter: 4.05 DIA
- Central hole diameter: 1.42 DIA
- Central hole spacing: 4.05 DIA
- Central hole diameter: 3.90 DIA
- Central hole spacing: 4.05 DIA
- Central hole diameter: 3.42 DIA
- Central hole spacing: 9.35

ALL DIMENSIONS IN INCHES

Known using weapons --- Field gun M1944 and M1955, tank guns D-10T, D-10TC, and D-10T2S, AA gun KS-19M2, and assault gun 1944

Remarks --- Also uses RGM series fuzes.

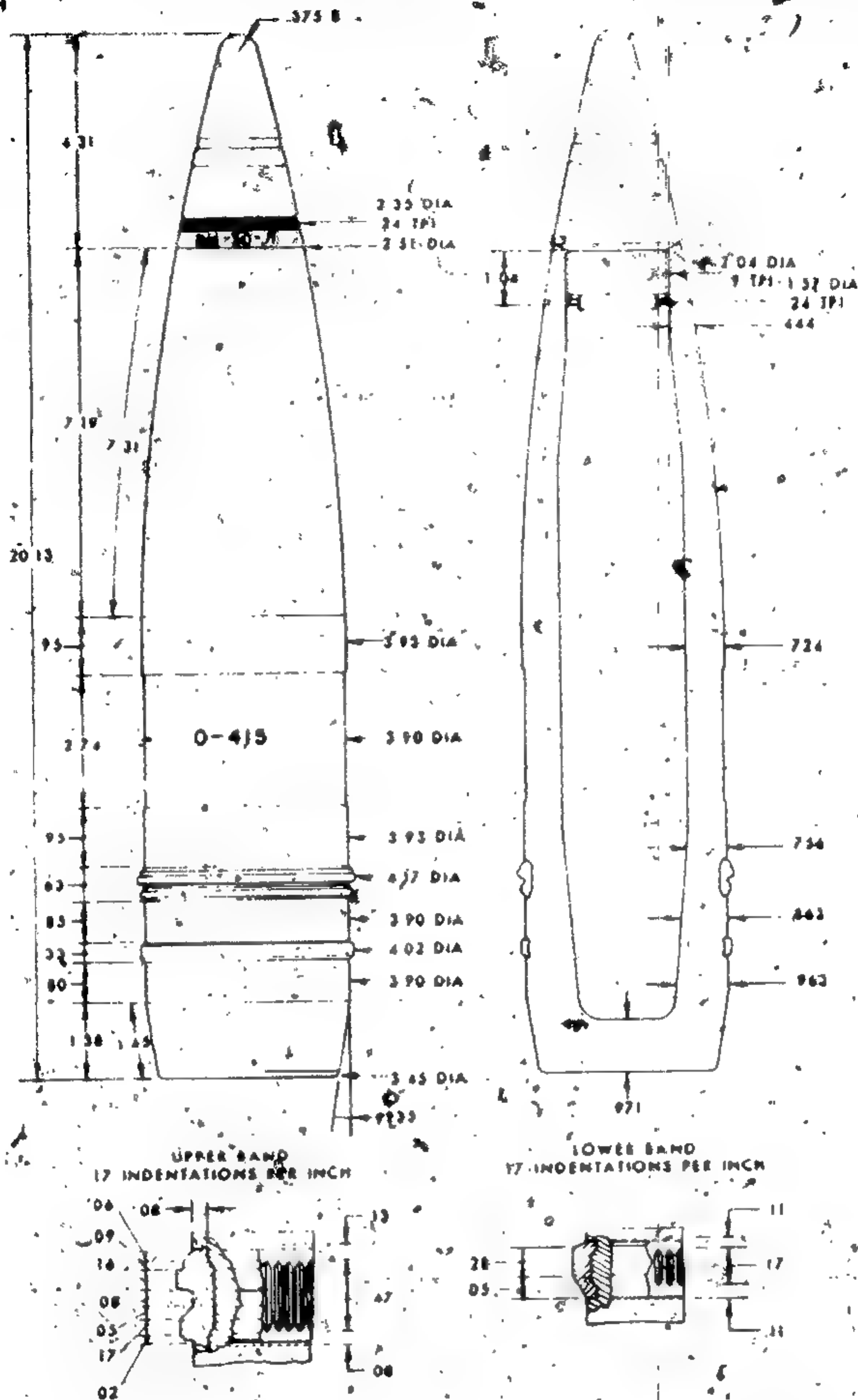
Figure 69. Soviet 100-mm frag-HE projectile Model OF-412.

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Original



ALL DIMENSIONS IN INCHES

Caliber	100 mm	(Continued)	mechanical time
Identification	0-415	Known using	
Type	Frag	weapon	Antiaircraft gun
Weight (fuzed)	34.01 lb		KS-19
Bursting charge	3.47 lb	Remarks	Weight of explosive charge includes
Fuze	Model VM-30 and VM-30L		aluminized explosive pellet in filler.

Figure 69a. Soviet 100-mm frag projectile Model 0-415.

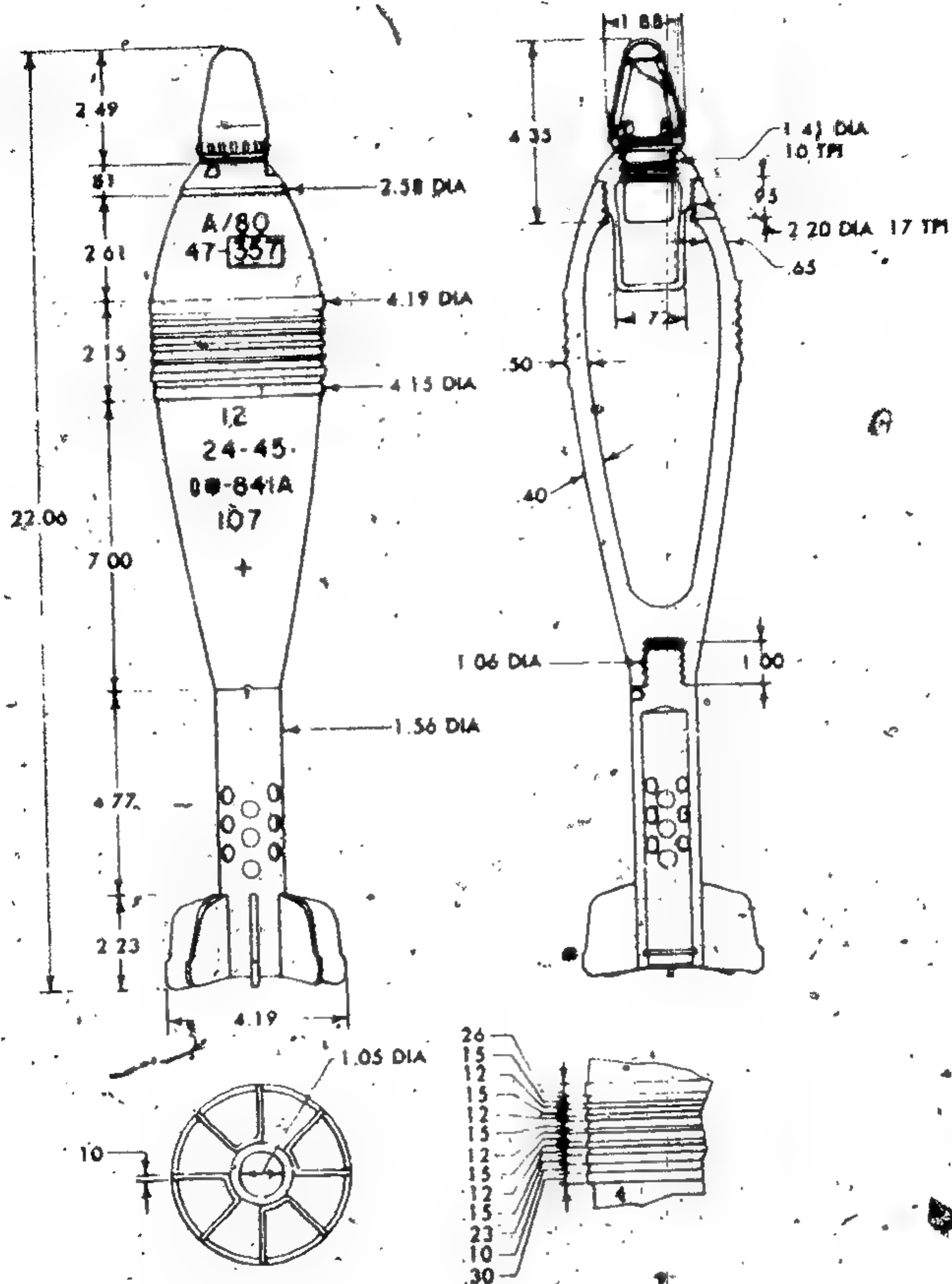
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Original



Neg. 502874  
ALL DIMENSIONS IN INCHES

Caliber	107 mm
Identification	OF-841A
Type	Frag-HE
Weight (fuzed)	20.00 lb
Bursting charge	2.20 lb
	TNT/amatol
Fuze	GVMZ-7 point detonating

Known using weapon	Mountain-pack regimental mortar M1938
Remarks	Also uses Models GVMZ and GVMZ-1 point detonating fuzes. Fuze is shown with shipping cap installed.

Figure 70. Soviet 107-mm frag-HE projectile Model OF-841A.

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# UNCLASSIFIED

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Original

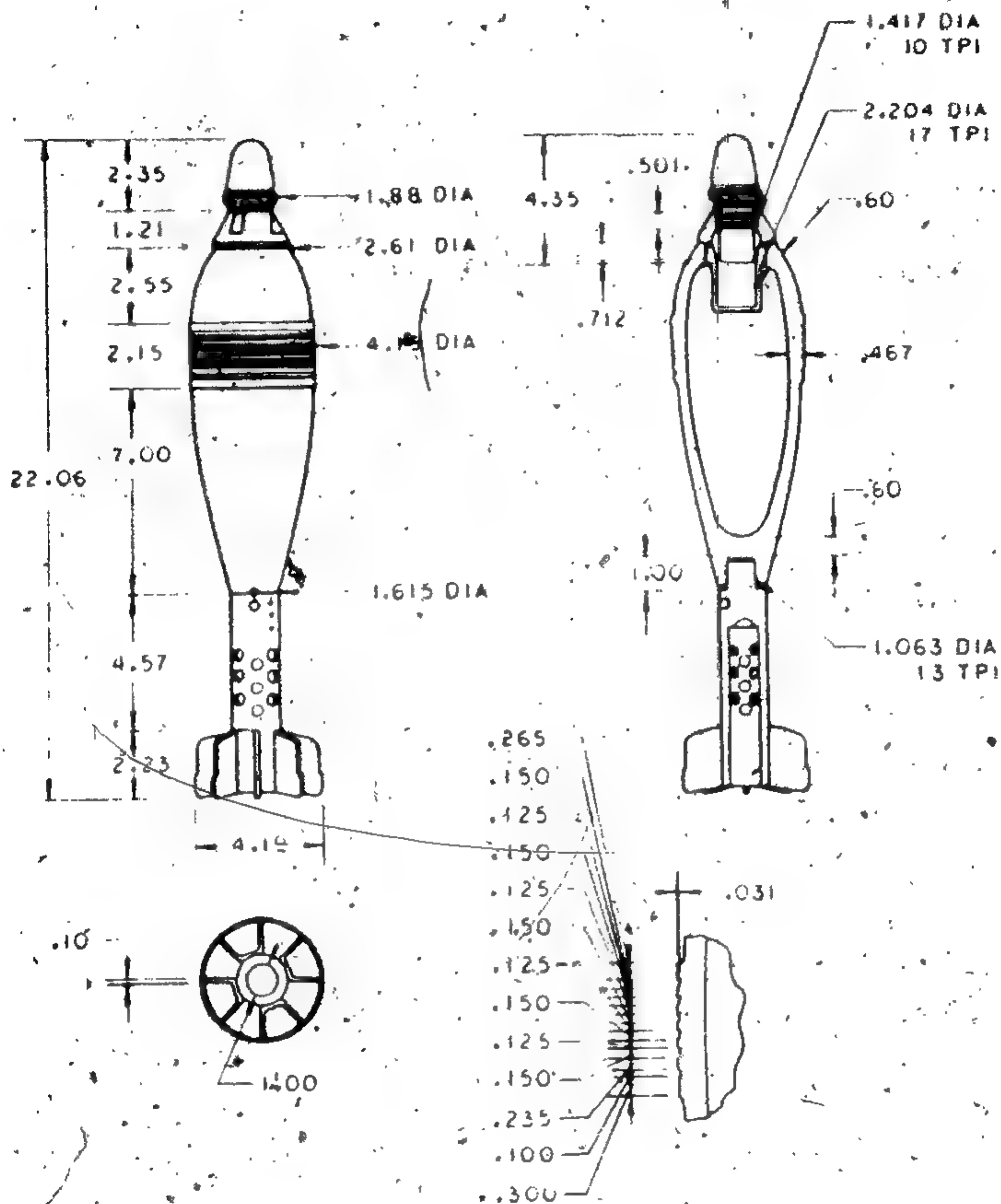


Fig. 502875 ALL DIMENSIONS IN INCHES

Caliber	107 mm	Known using	
Identification	OF-841	weapon	Mountain-pack
Type	Frag-HE		regimental mortar
Weight (fuzed)	17.41 lb		M1938
Bursting charge	4.63 lb	Remarks	Also uses Model
TNT/Schneiderite			GVMZ-1 point
Fuze	Model GVMZ		detonating fuze.
point detonating			

Figure 71. Soviet 107-mm frag-HE projectile Model OF-841.

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Original

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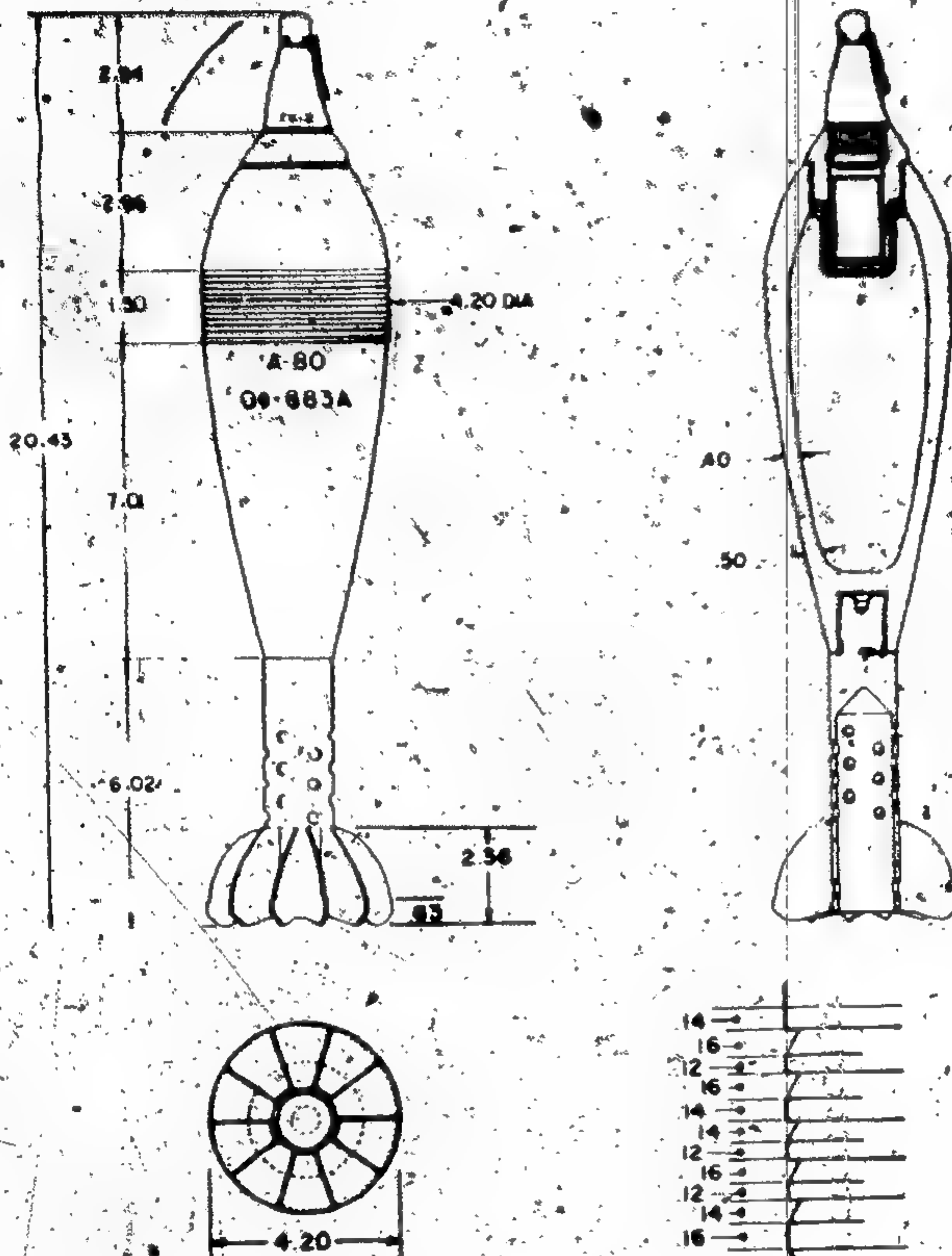


Fig. 502876

ALL DIMENSIONS IN INCHES

Caliber	107 mm
Identification	OF-883A
Type	Frag-HE
Weight (fuzed)	18.72 lb
Bursting charge	4.6 lb
	amatol 80/20
Fuze	Model GK-2 point detonating

Known using  
weapon  
Remarks

Recoilless gun B-11  
The reverse side of  
the projectile is  
marked 107 mm

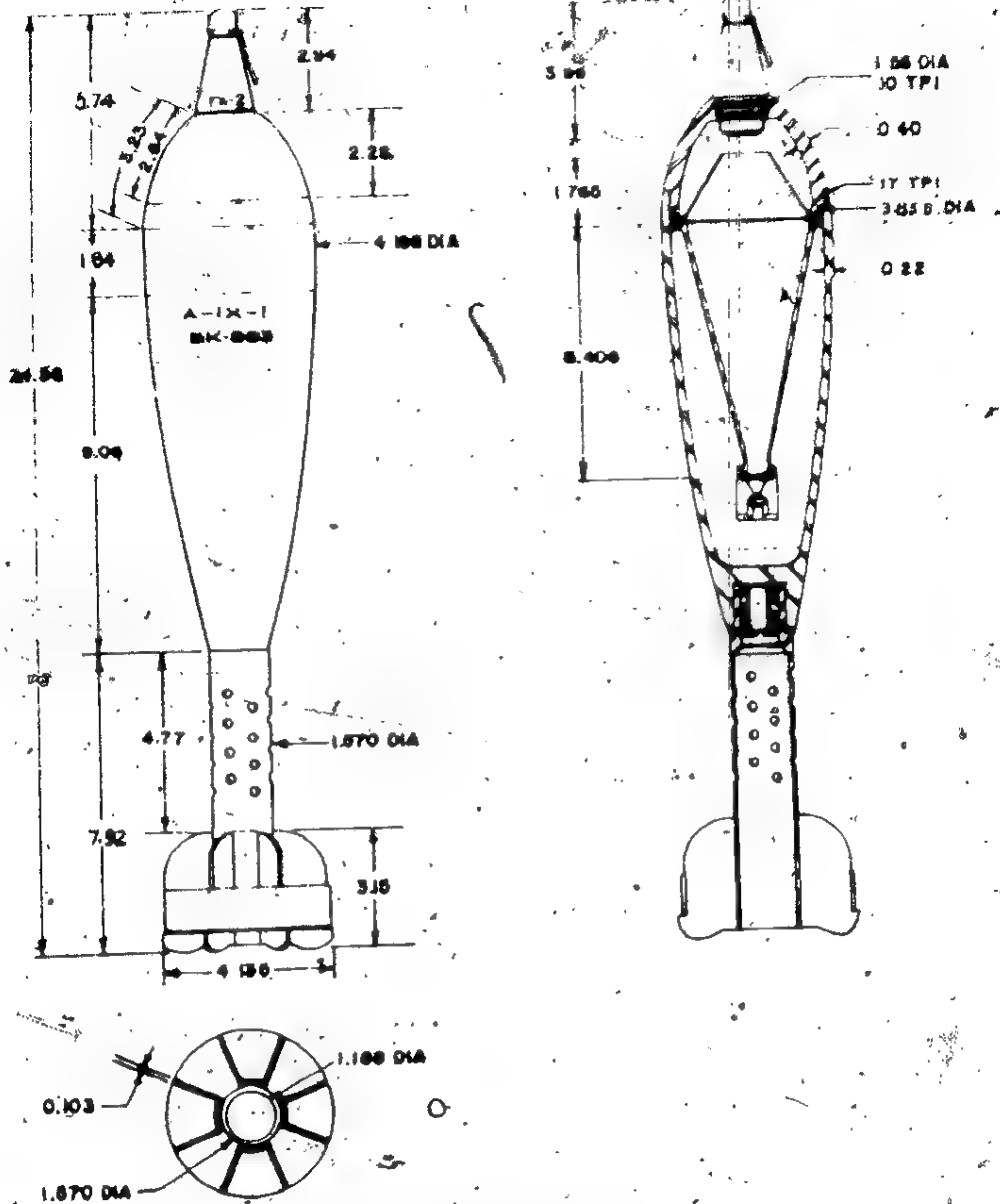
Figure 72: Soviet 107-mm frag-HE projectile Model OF-883A.

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Neg. 502877

ALL DIMENSIONS IN INCHES

Caliber	107 mm	Fuze	Model GK-2 PIED
Identification	BK-883	Known using	
Type	HEAT	weapon	Recoilless gun
Weight (fuzed)	16.54 lb		B-11
Bursting charge	2.33 lb		
	RDX/ aluminum		

Figure 73. Soviet 107-mm HEAT projectile Model BK-883.

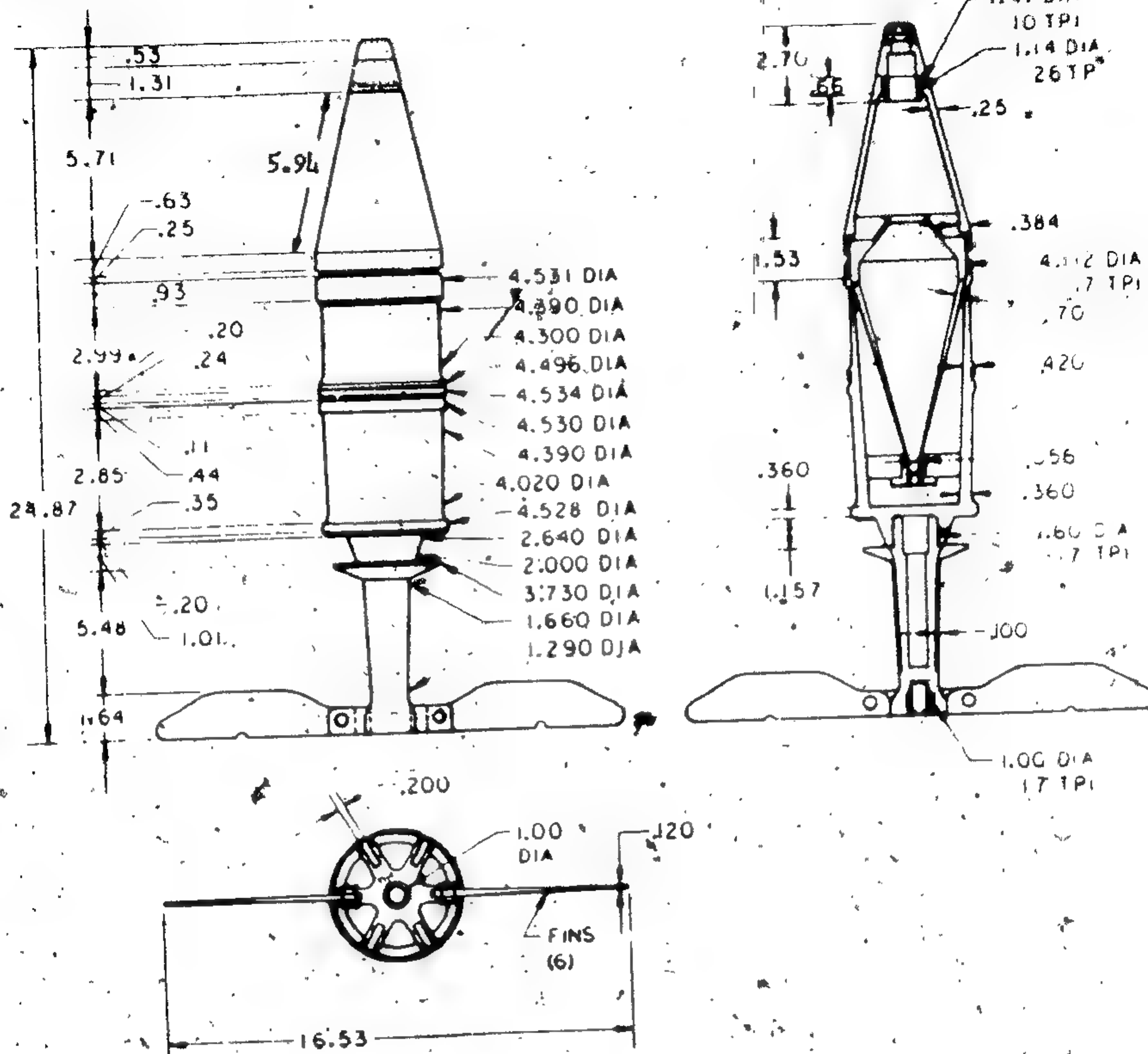
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Neg. 502878

ALL DIMENSIONS IN INCHES

Caliber	115 mm	Fuze	Model GPV-2 PIBD
Identification	BK-4	Known using	
Type	HEAT	weapon	Tank gun on T-62 tank
Weight (fuzed)	26 lb (approx)		
Bursting charge	3.42 lb RDX/aluminum		

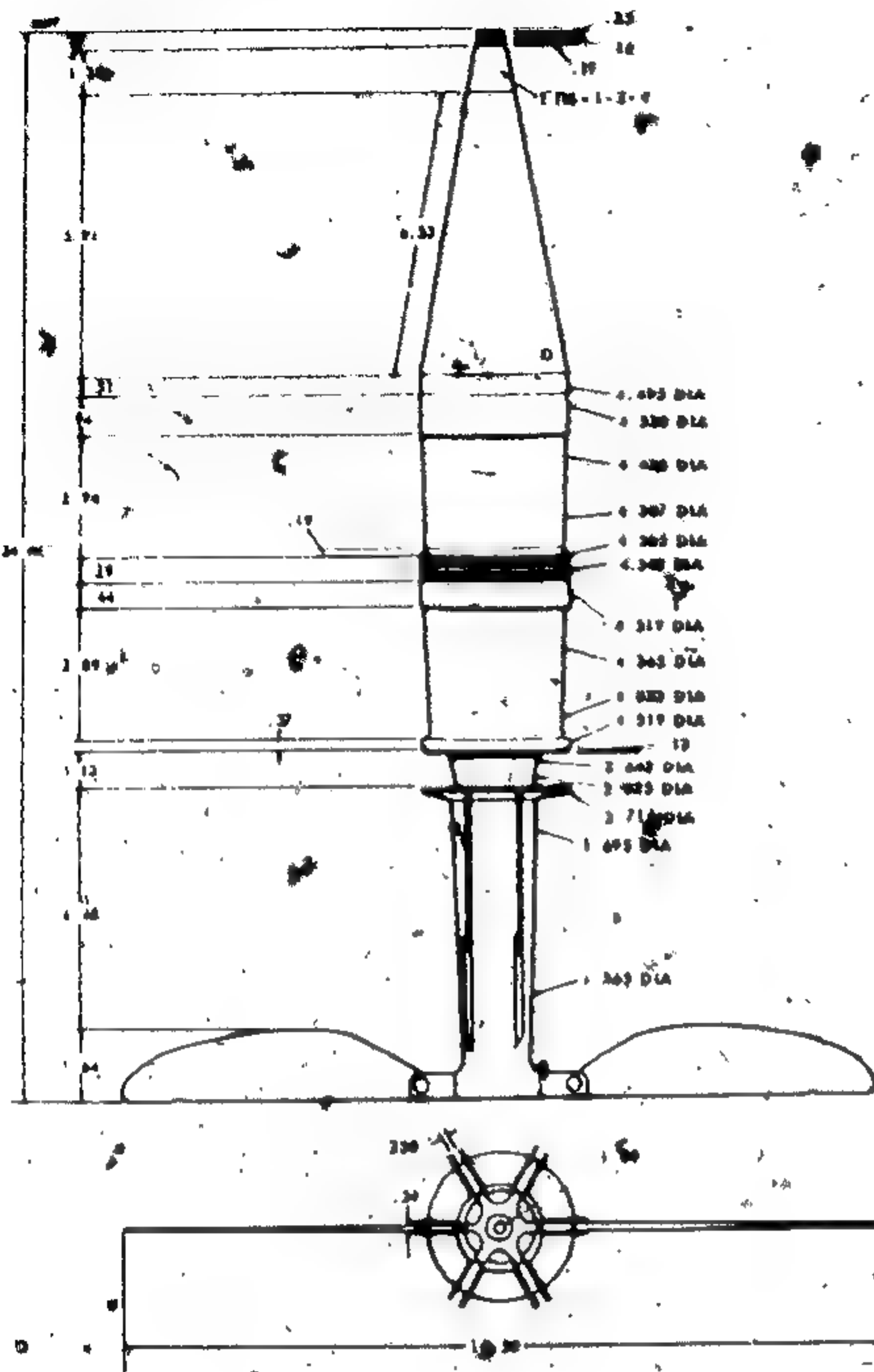
Figure 74. Soviet 115-mm HEAT projectile Model BK-4.

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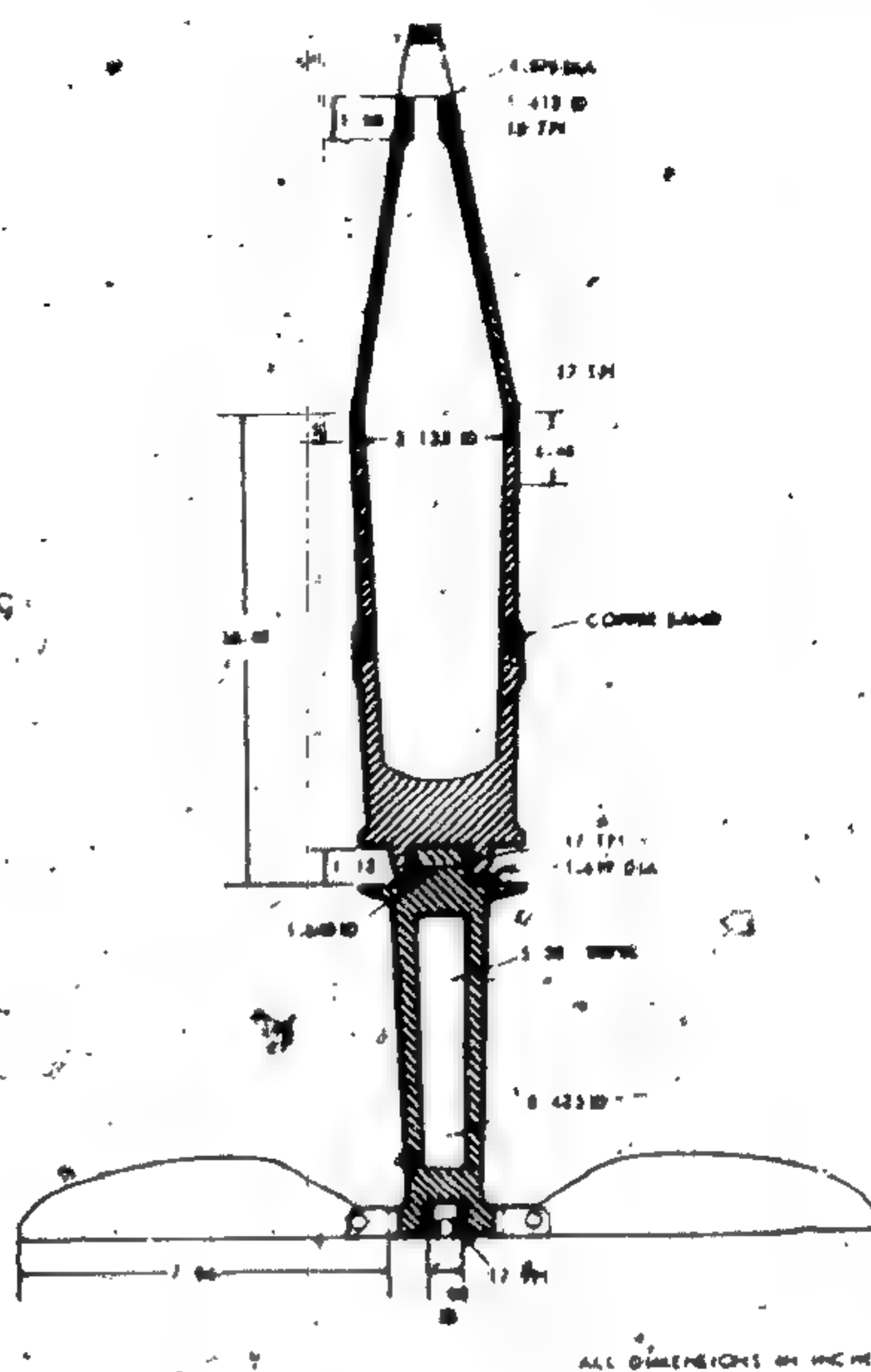
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Original



Neg. 502879



ALL DIMENSIONS IN INCHES

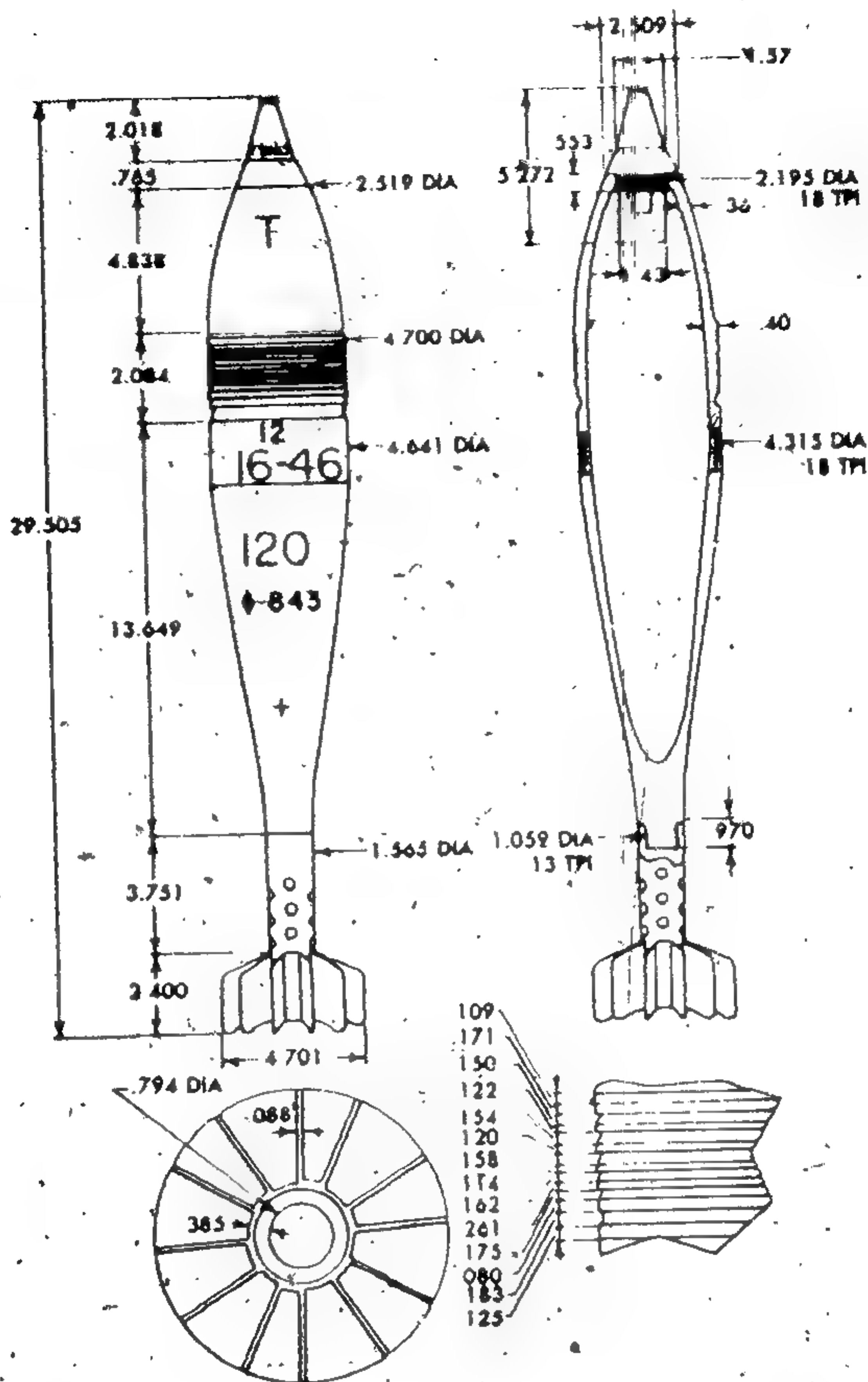
Caliber	-----	115	mm
Identification	-----	BK-4	
Type	-----	HEAT	
Weight (fuzed)	-----	25.15	lb
Bursting charge	-----	3.5	lb
(est), RDX/aluminum			
Fuze	-----	Model	GPV-
		1-2-4	
		BIBD	

Known using	
Weapon	T-62 tank gun
Remarks	Explosive filler and internal parts are not available. Pro- jectile and fuze are inert practice types.

Figure 74a. Soviet 115-mm HEAT projectile Model BK-4 (variant).

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Neg. 502880

ALL DIMENSIONS IN INCHES

Caliber ----- 120 mm  
 Identification ----- F-843  
 Type ----- HE  
 Weight (fuzed) ----- 36.23 lb  
 Bursting charge ----- 8.6 lb  
 Fuze ----- Model GVMZ  
 point  
 detonating

Known using  
weapons -----

Regimental  
mortars M1938 v  
and M1943

Remarks -----

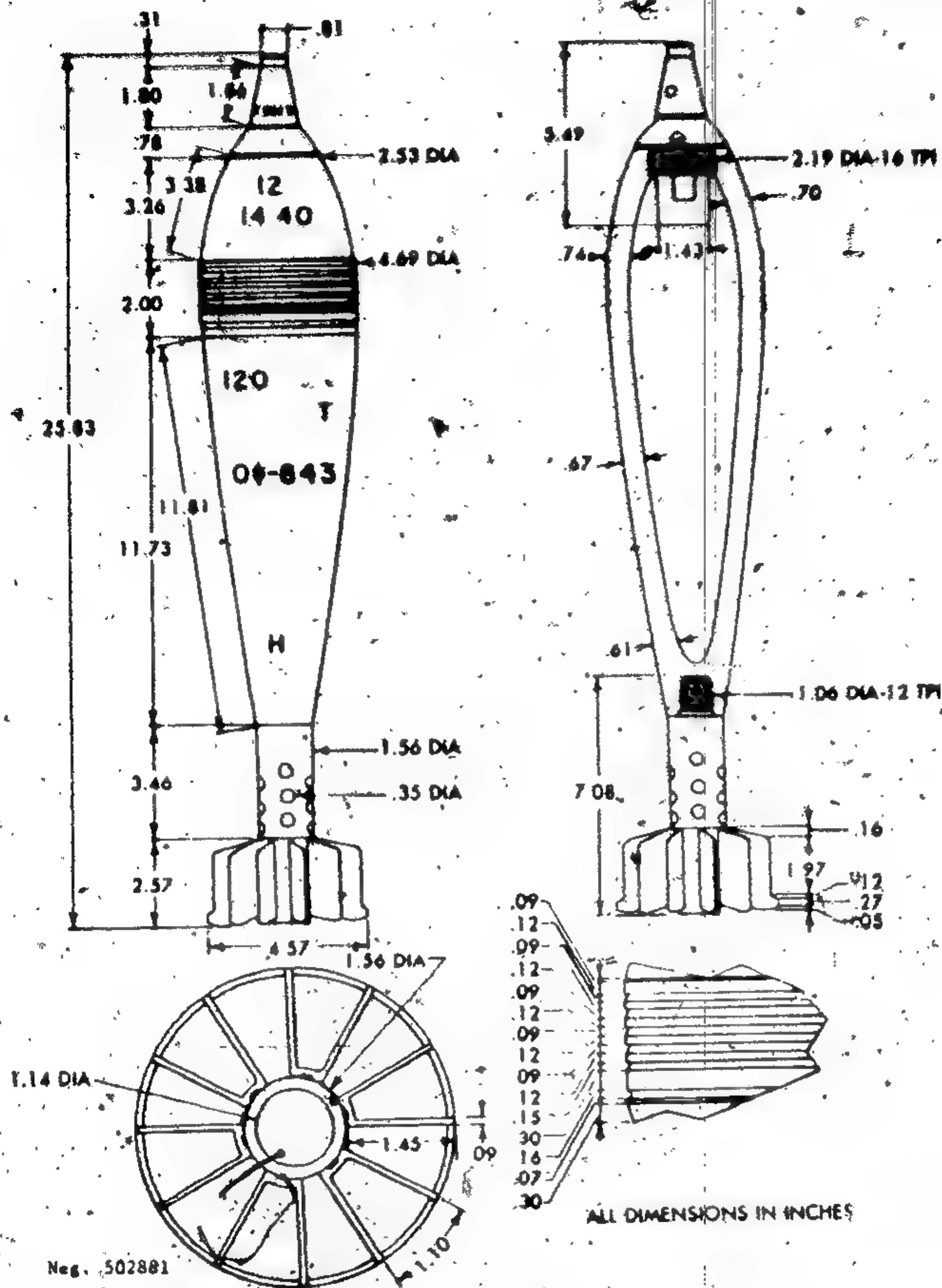
Also uses Model  
M-1 point  
detonating  
fuze.

Figure 75. Soviet 120-mm HE projectile Model F-843.

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**ST-CW-07-29-74**

**Original**



Caliber -----	120 mm
Identification ----	OF-843
Type -----	Frag-HE
Weight (fuzed) ----	35.28 lb
Bursting charge ----	5.90 lb TNT
Fuze -----	Model GVMZ point detonating

Known using weapons	Regimental mortars M1938 and M1943
Remarks	Also uses Models M-1 and M-4 point detonating fuzes.

Figure 76. Soviet 120-mm frag-HE projectile Model OF-843.

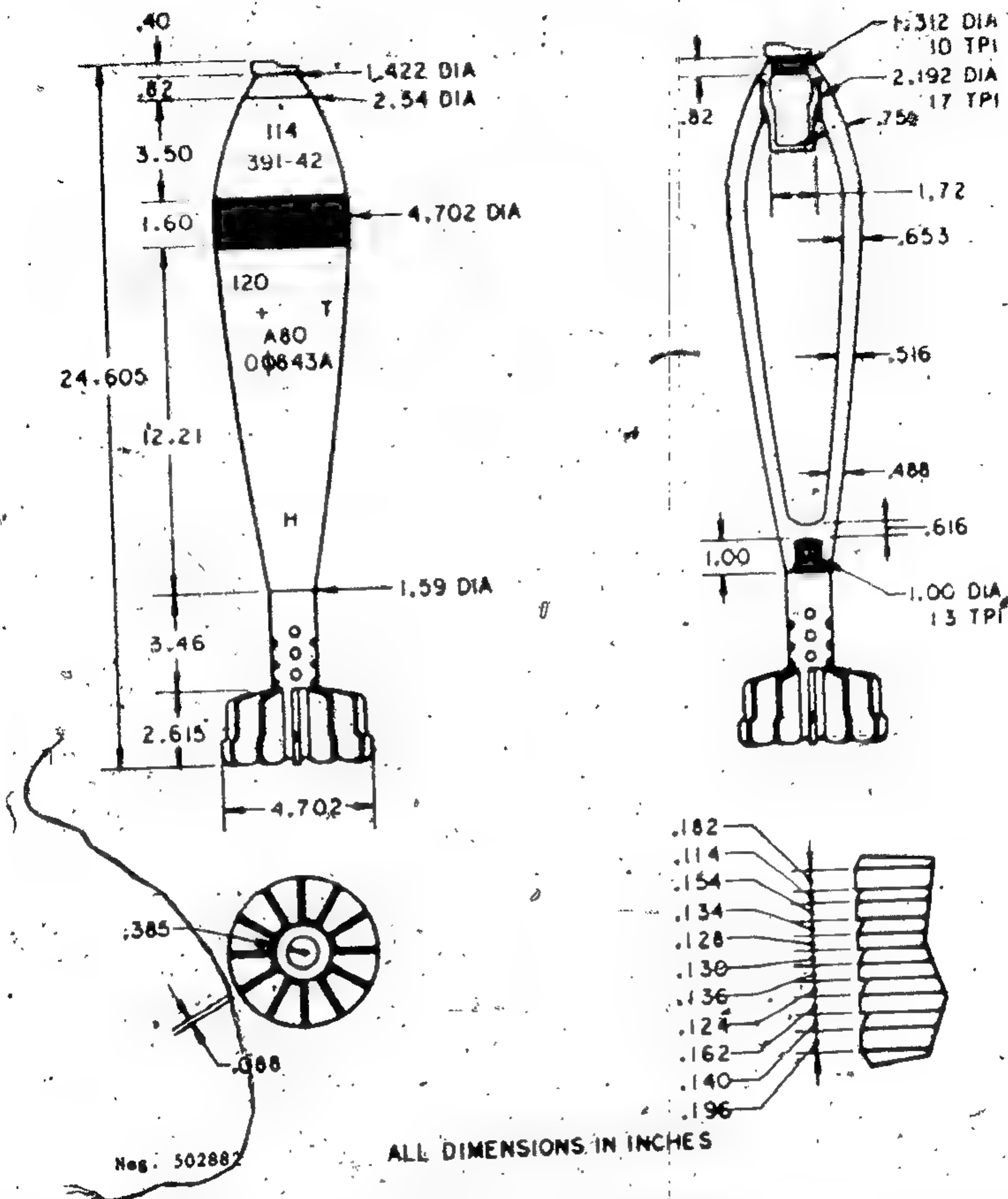
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Caliber	120 mm
Identification	OF-843A
Type	Frag-HE
Weight (fuzed)	35.20 lb.
Bursting charge	3.48 lb amatol 80/20
Fuze	Model GVMZ-1 point detonating

Known using  
weapons

Remarks

Regimental mortars,  
M1938 and M1943.  
Also uses Model M-1  
point detonating  
fuze. Illustrated  
with nose plug in-  
stead of fuze.

Figure 77. Soviet 120-mm frag-HE projectile Model OF-843A.

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Original

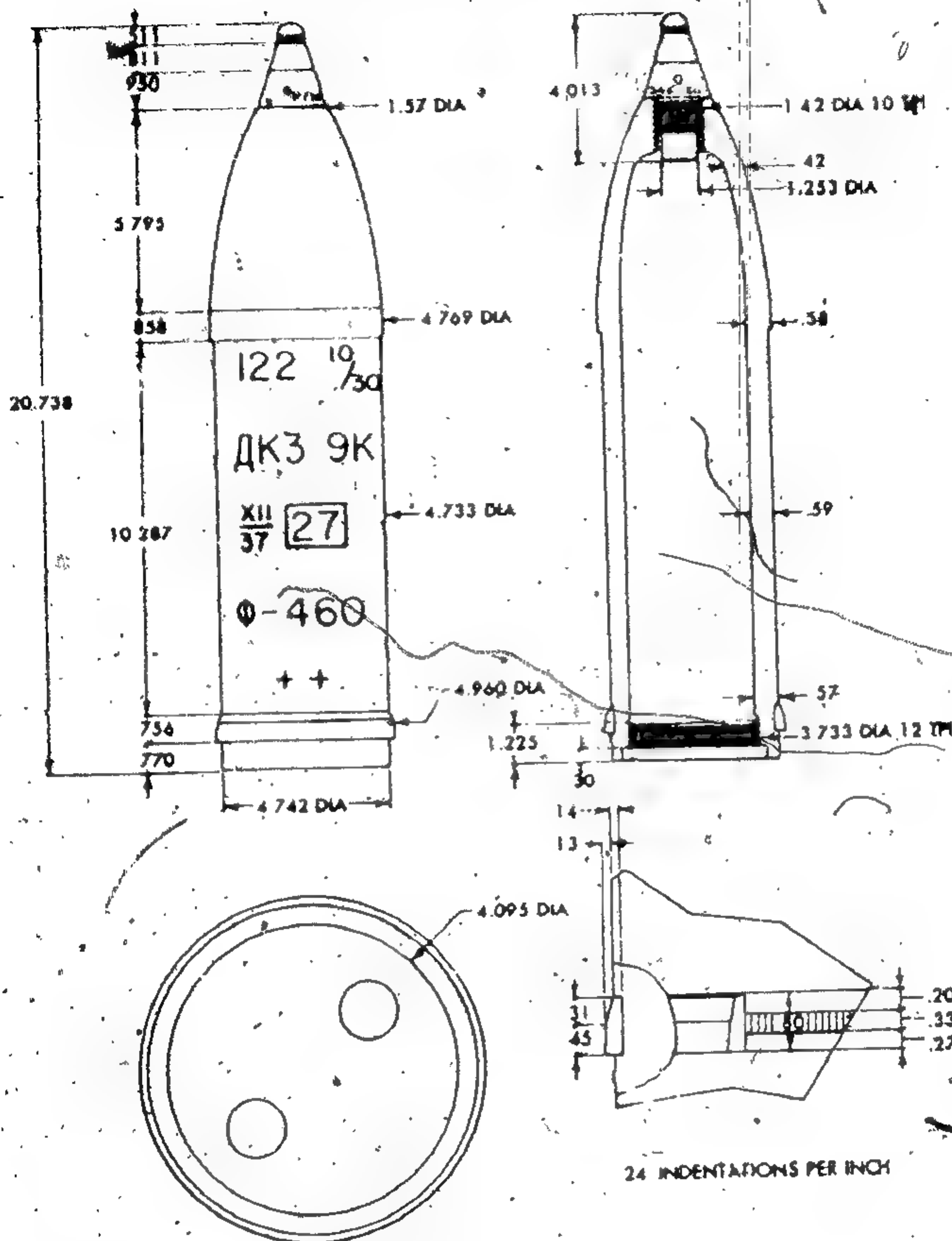


Fig. 502883 ALL DIMENSIONS IN INCHES

Caliber	122 mm
Identification	F-460
Type	HE
Weight (fuzed)	49.94 lb
Bursting charge	10.61 lb. TNT
Fuze	Model RGM point detonating

Known using	Howitzer M1910/30
weapon	
Remarks	Also uses Model RC-6 point detonating fuze.

Figure 78. Soviet 122-mm HE projectile Model F-460.

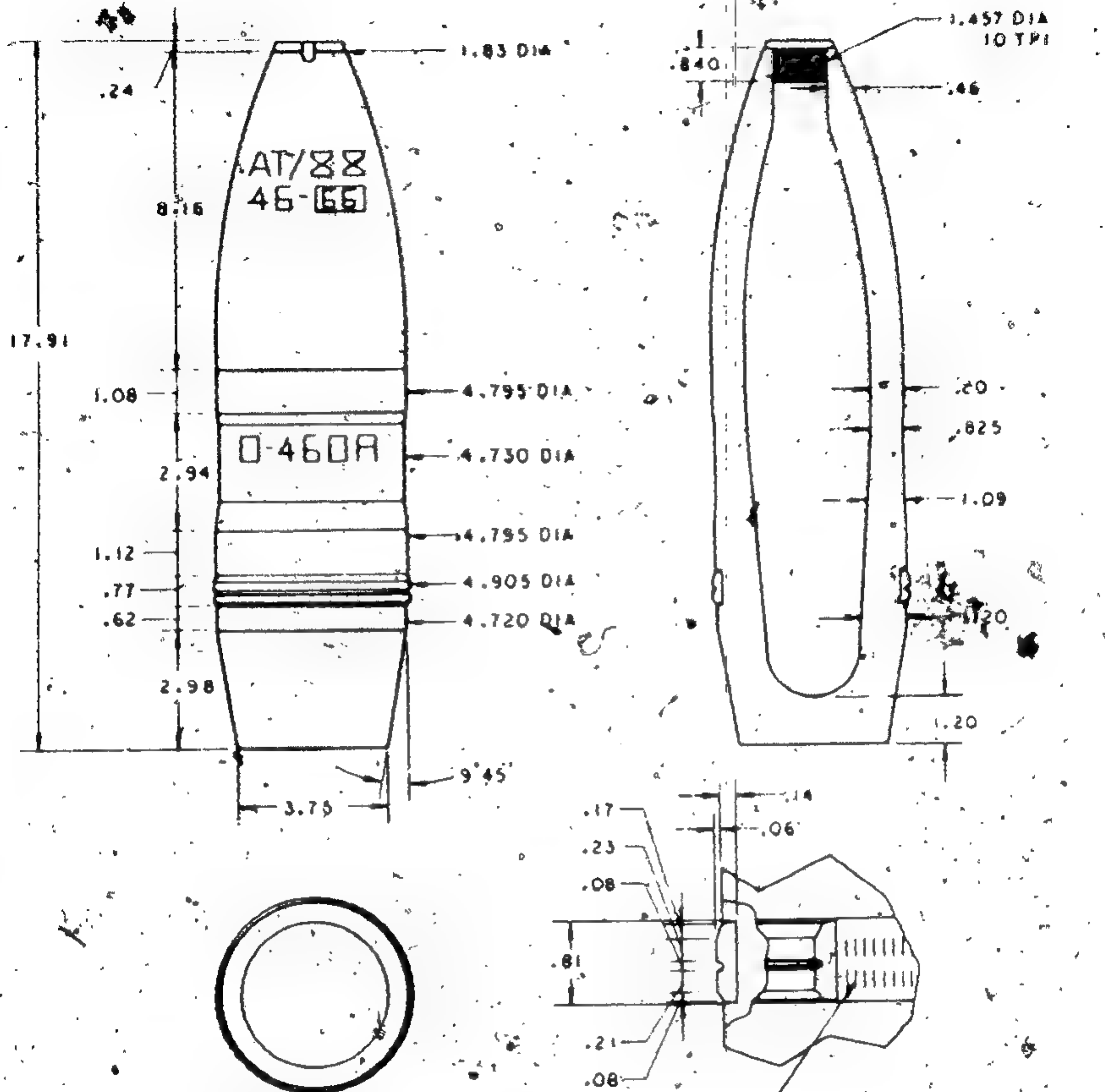
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ALL DIMENSIONS IN INCHES

Caliber	122 mm	Known using	Howitzer M1938.
Identification	O-460A	weapon	(M-30)
Type	Frag	Remarks	Illustrated with-
Weight (fuzed)	48.59 lb		out fuze. Also
Bursting charge	4.37 lb		uses Model RGM
	TNT/		point detonating
	amatol		fuze and Model D-1
Fuze	Model RGM-2		time and super-
	point		quick. fuzes.
	detonating		

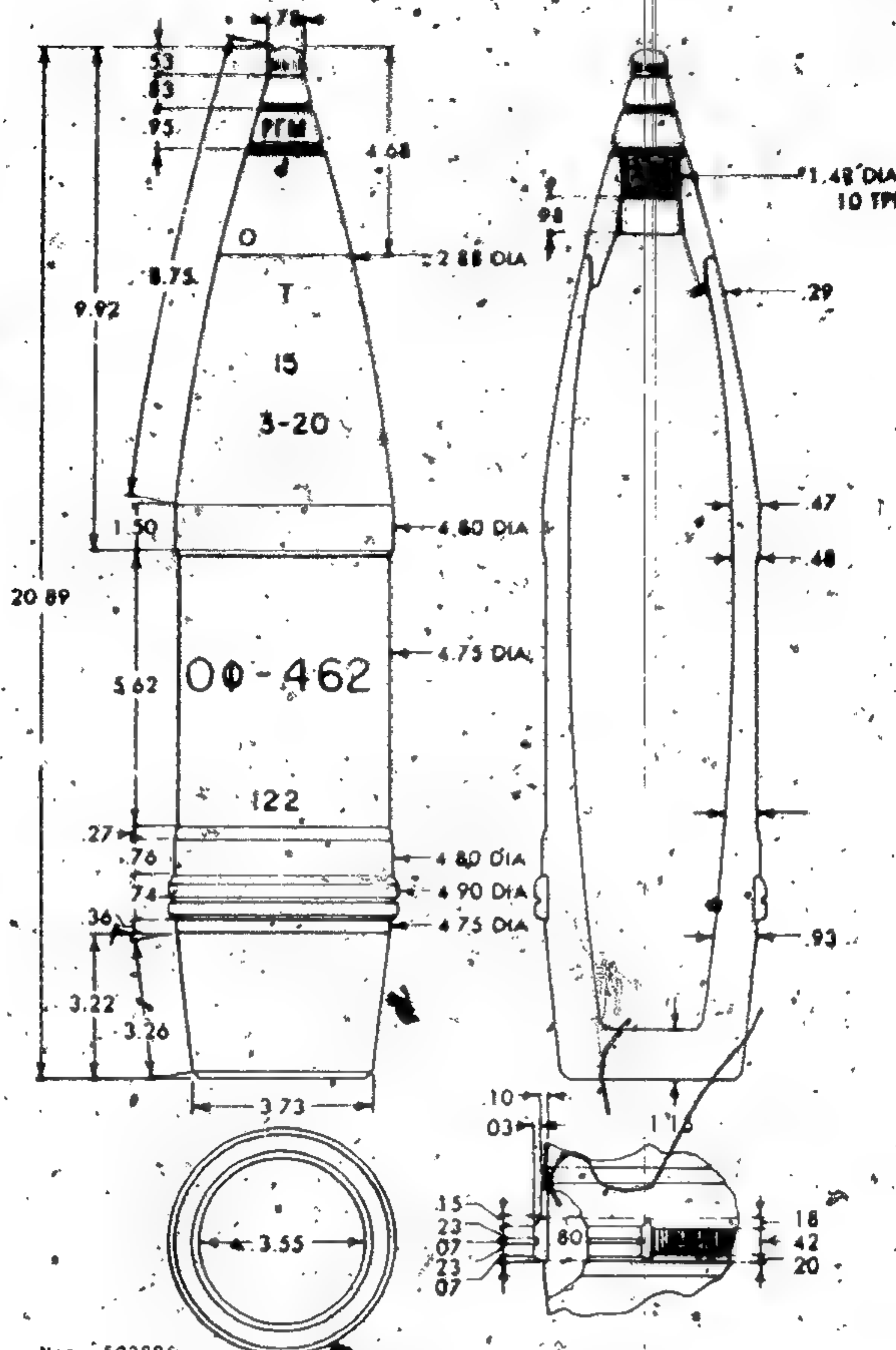
Figure 79. Soviet 122-mm frag projectile. Model O-460A.

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ALL DIMENSIONS IN INCHES

19 INDENTATIONS PER INCH

Caliber	122 mm	(Continued)	M1910/30, M1938 (M-30),
Identification	OF-462		and D-30 and field guns.
Type	Frag-HE		M1931 and M1931/37 (A-19)
Weight (fuzed)	47.96 lb	Remarks	Also uses Models RC-6 and
Bursting charge	8.10 lb TNT		RGM-2 point detonating
Fuze	Model RGM		fuzes and Model D-1 time
	point		and superquick fuzes.
	detonating		Considered a two-piece
Known using			projectile by the Soviets.
weapons	Howitzers		

Figure 80. Soviet 122-mm frag-HE projectile Model OF-462 (two-piece).

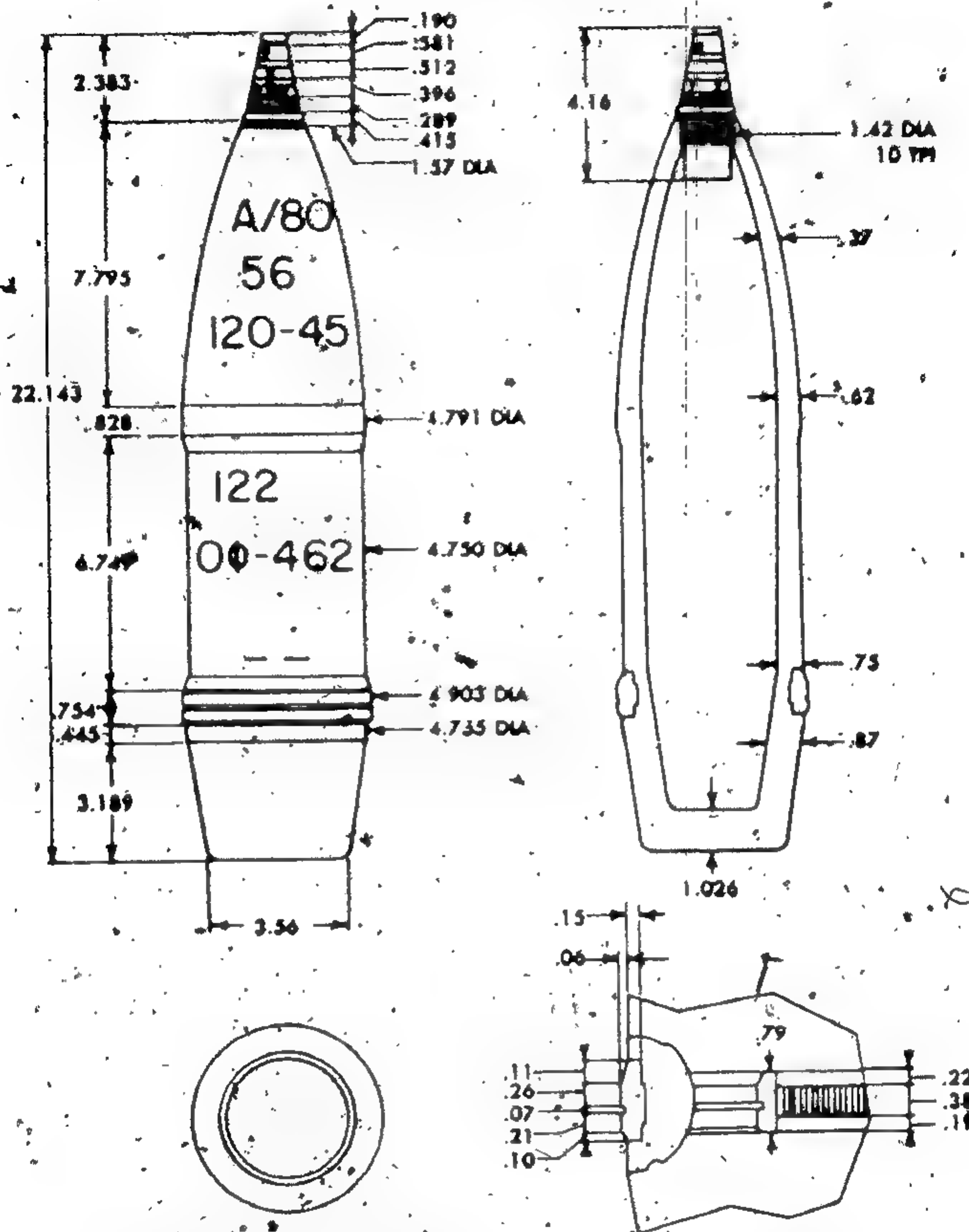
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ALL DIMENSIONS IN INCHES

14 INDENTATIONS PER INCH

Caliber	122 mm	Known using
Identification	OF-462	weapons
Type	Frag-HE	Howitzers M1910/30, M1938 (M-30), and D-30 and field guns M1931 and M1931/37 (A-19)
Weight (fuzed)	47.84 lb	
Bursting charge	8.10 lb amatol 80/20	Remarks
Fuze	Model D-1 TSQ	Also uses Models RC-6, RCM, and RCM-6 point detonating fuzes.

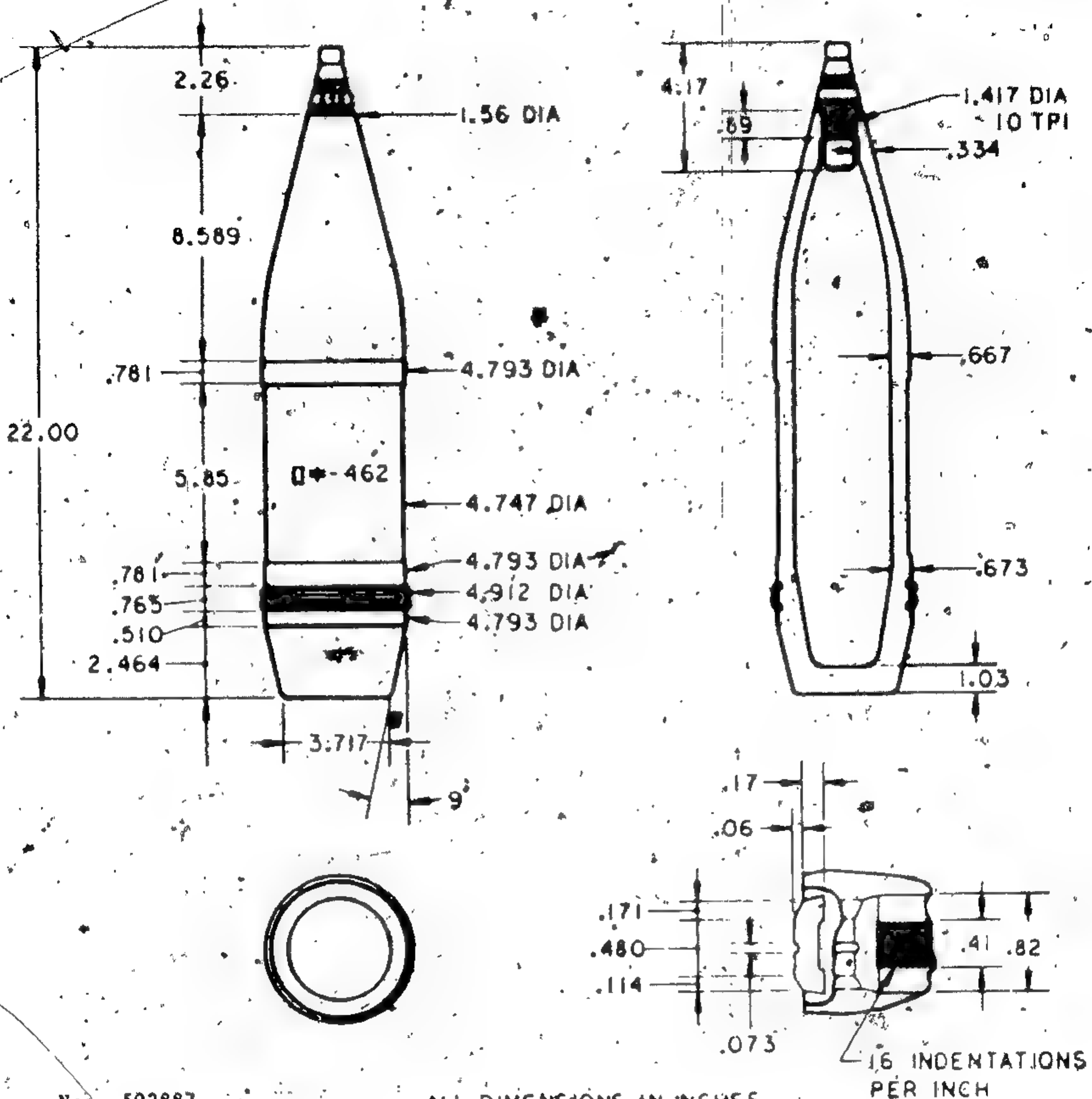
Figure 81. Soviet 122-mm frag-HE projectile Model OF-462.

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Original



Caliber	122 mm	Known using	
Identification	OF-462	weapons	Howitzers M1910/30, M1938 (M-30), D-30 and field guns M1931 and M1931/37 (A-19)
Type	Frag-HE	Remarks	Also uses Models RG-6 and RGM-2 point detonating fuzes and Model D-1 time and superquick fuzes.
Weight (fuzed)	47.13 lb		
Bursting charge	8.10 lb TNT/amatol		
Fuze	Model RGM point detonating		

Figure 82. Soviet 122-mm frag-HE projectile Model OF-462 (variant).

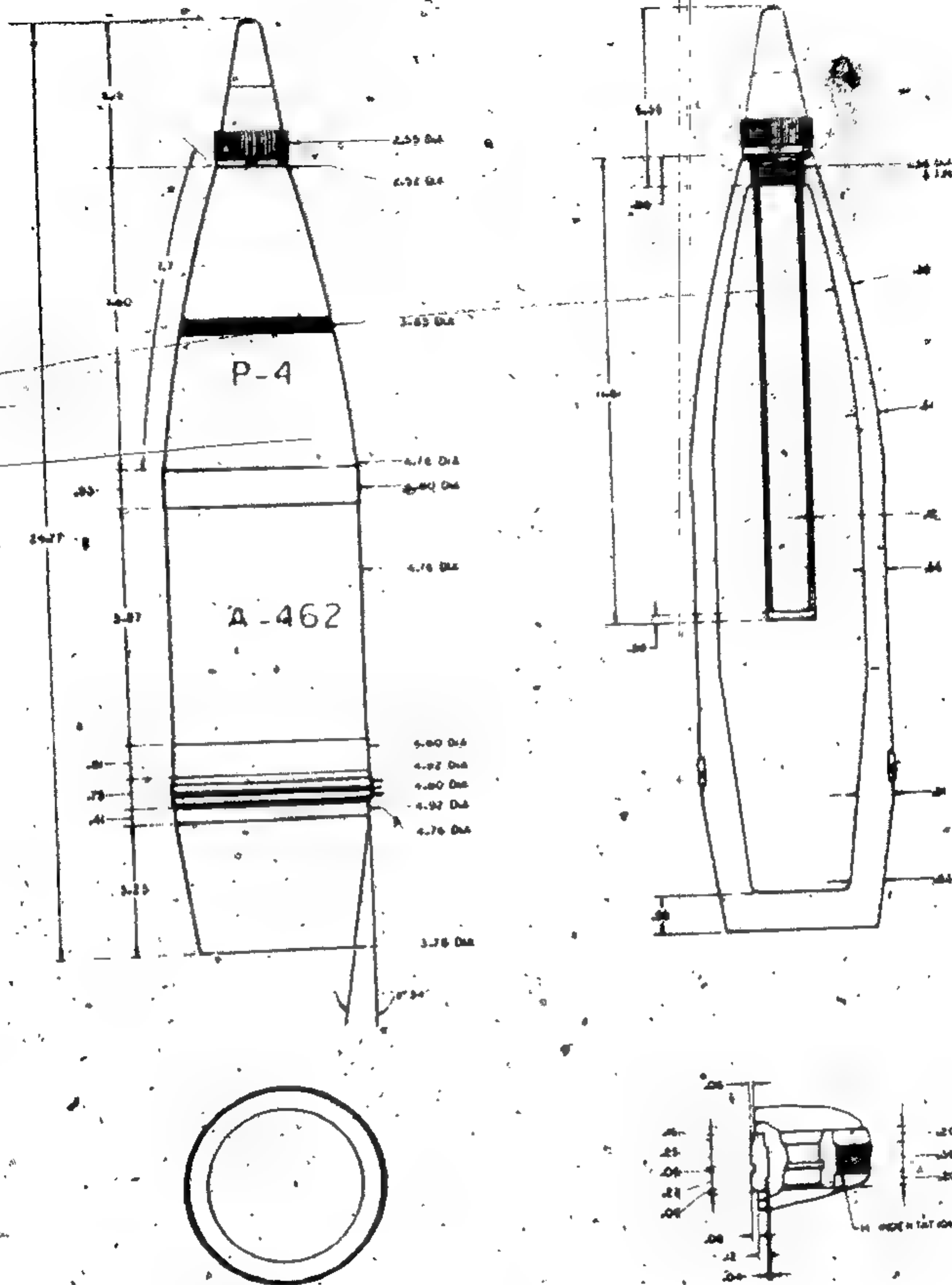
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Neg. 502888  
ALL DIMENSIONS IN INCHES

Caliber	122 mm
Identification	D-462
Type	Smoke
Weight (fuzed)	49.12 lb
Bursting charge	8.5 lb TNT/WP
Fuze	Model KTM-2 point detonating
Known using weapons	Howitzers

(Continued) — D-30, M1910/30, and M1938 (M-30) and field guns M1931 and M1931/37 (A-19)

Remarks — Bursting charge consists of 0.4 pound TNT and 8.1 pounds of white phosphorus.

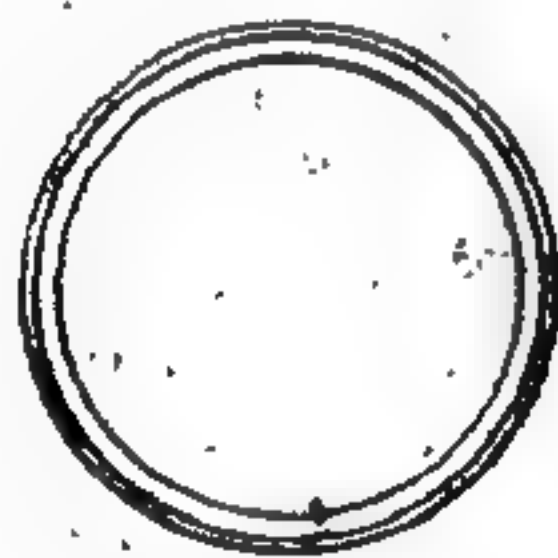
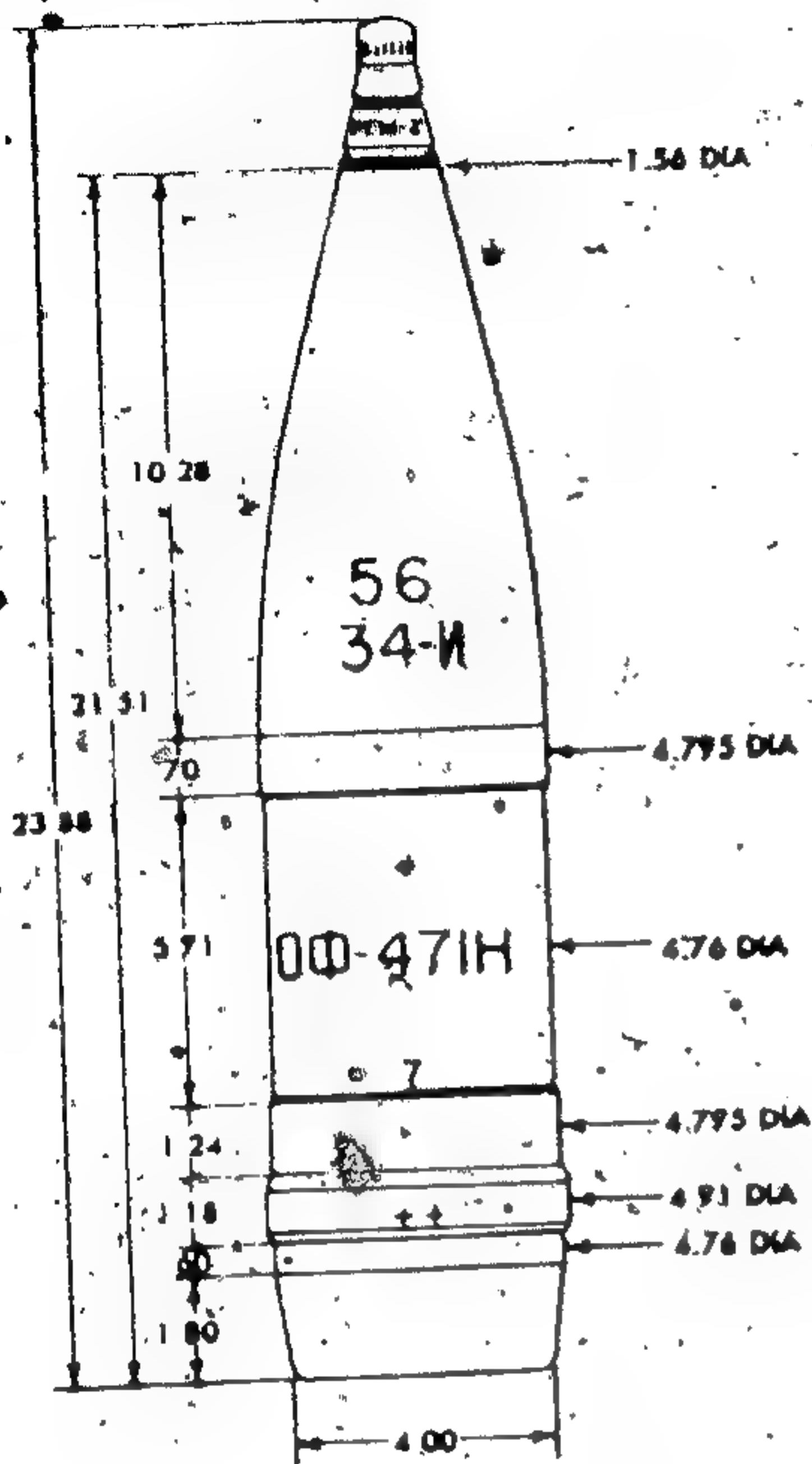
Figure 83. Soviet 122-mm smoke projectile Model D-462.

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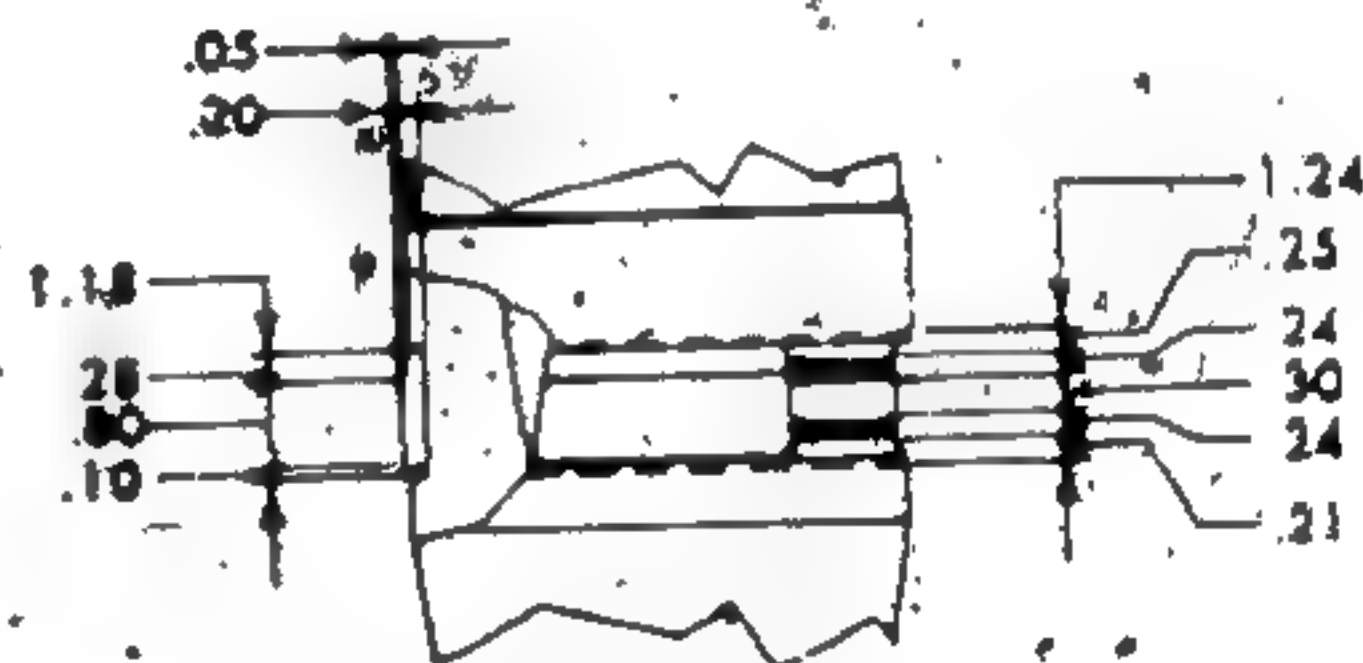
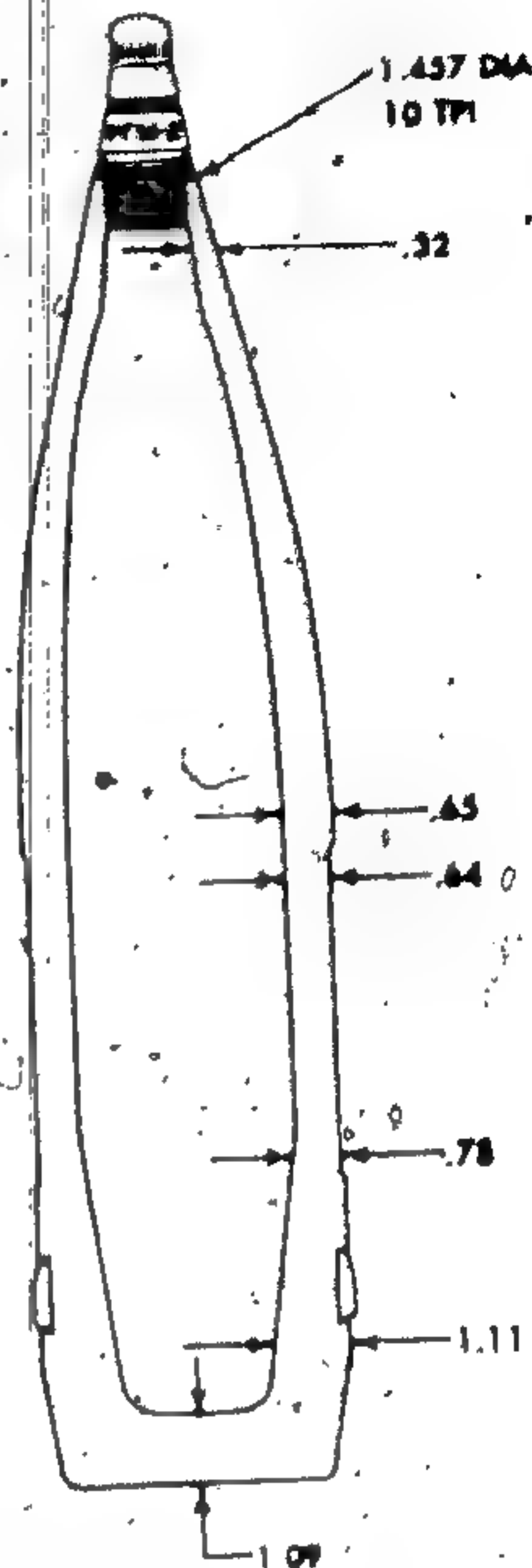
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Neg. 502889.

ALL DIMENSIONS IN INCHES



20 INDENTATIONS PER INCH

Caliber -----	122 mm
Identification ----	OF-47IN
Type -----	Frag-HE
Weight (fuzed) ----	55.00 lb
Bursting charge ---	7.41 lb TNT
Fuze -----	Model RGM-2
	point
	detonating

Known using  
weapons ----- Field guns MI931

(Continued)

and M1931/37 (4-19),  
tank gun M1943 (D-25),  
and SP assault guns  
M1944 (D-25S) and  
M1931/44 (A-19S)  
Also uses Models RCM  
and RCM-6 point  
detonating fuzes and  
Model D-1 time and  
superquick fuzes.

Remarks

Figure 84. Soviet 122-mm frag HE projectile Model OF-471N.

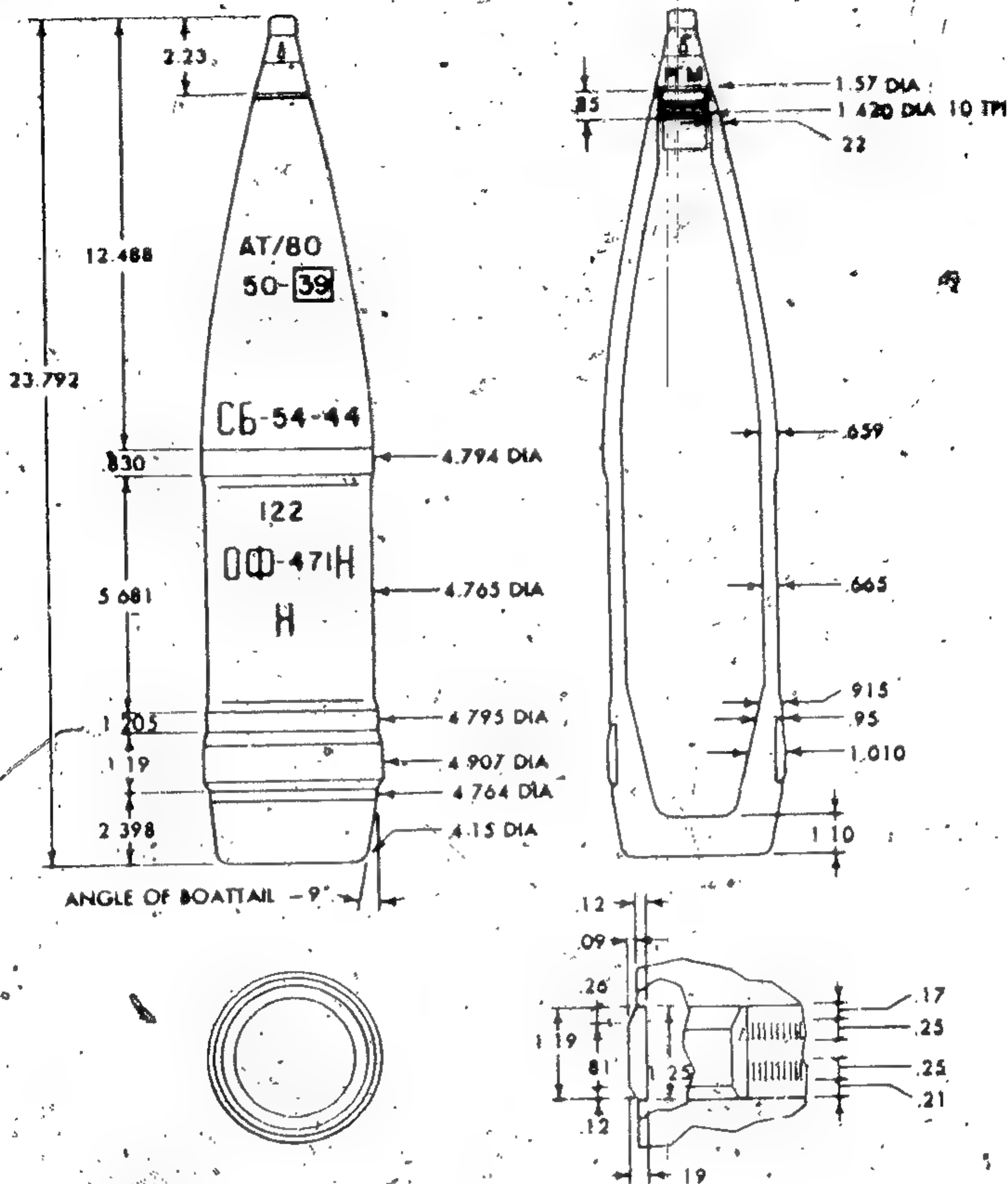
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Original



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ALL DIMENSIONS IN INCHES

21 INDENTATIONS PER INCH

Caliber	122 mm
Identification	OF-471N
Type	Frag-HE
Weight (fuzed)	56.16 lb
Bursting charge	10.71 lb
	TNT/ amatol
Fuze	Model RGM point detonating

Known using weapons	Field guns M1931 and M1931/37 (A-19), tank gun M1943 (D-25) and SP assault guns M1944 (D-25S) and M1931/44 (A-19S)
Remarks	Also uses Models REM-2 and REM-6. point detonating fuses and Model D-1 time and superquick fuses.

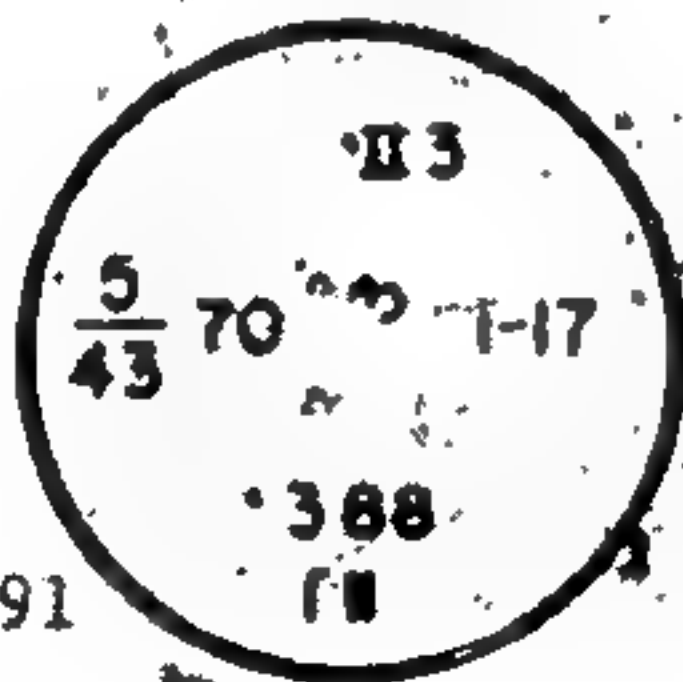
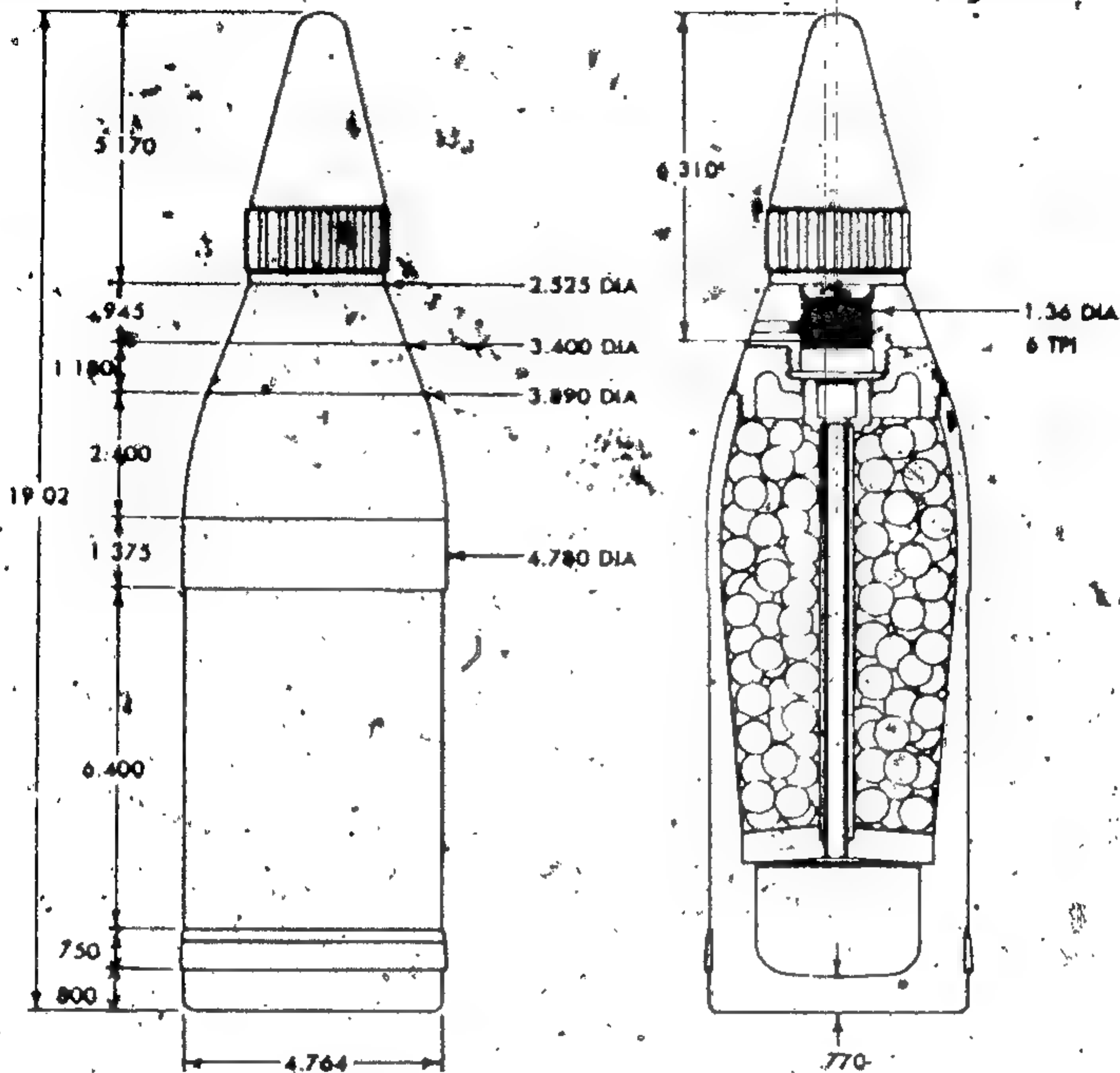
Figure 85. Soviet 122-mm frag-HE projectile Model OF-471N (variant)

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ALL DIMENSIONS IN INCHES

Caliber	122 mm	Known using	Howitzer M1910/30
Identification	Sh-462	weapon	
Type	Ball shrapnel	Remarks	May be encountered with other models of time fuzes.
Weight (fuzed)	51.25 lb		Illustration shows cover installed.
Bursting charge	0.60 lb black powder		
Fuze	Model T-6 TSQ		

Figure 86. Soviet 122-mm shrapnel projectile Model Sh-462.

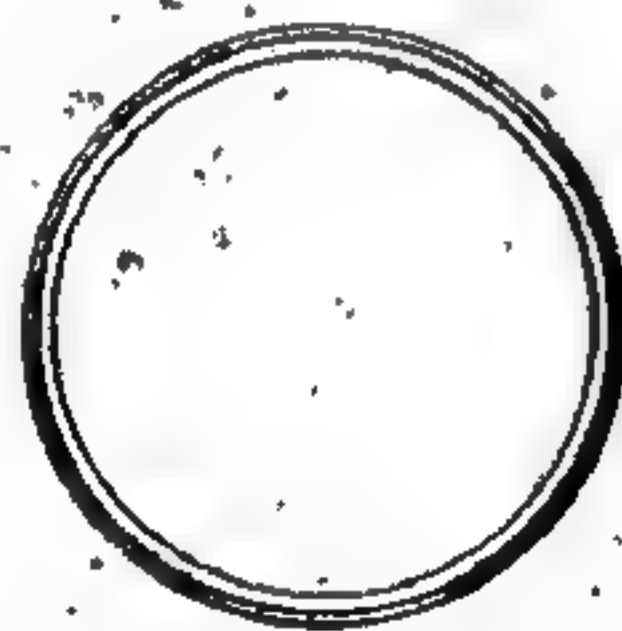
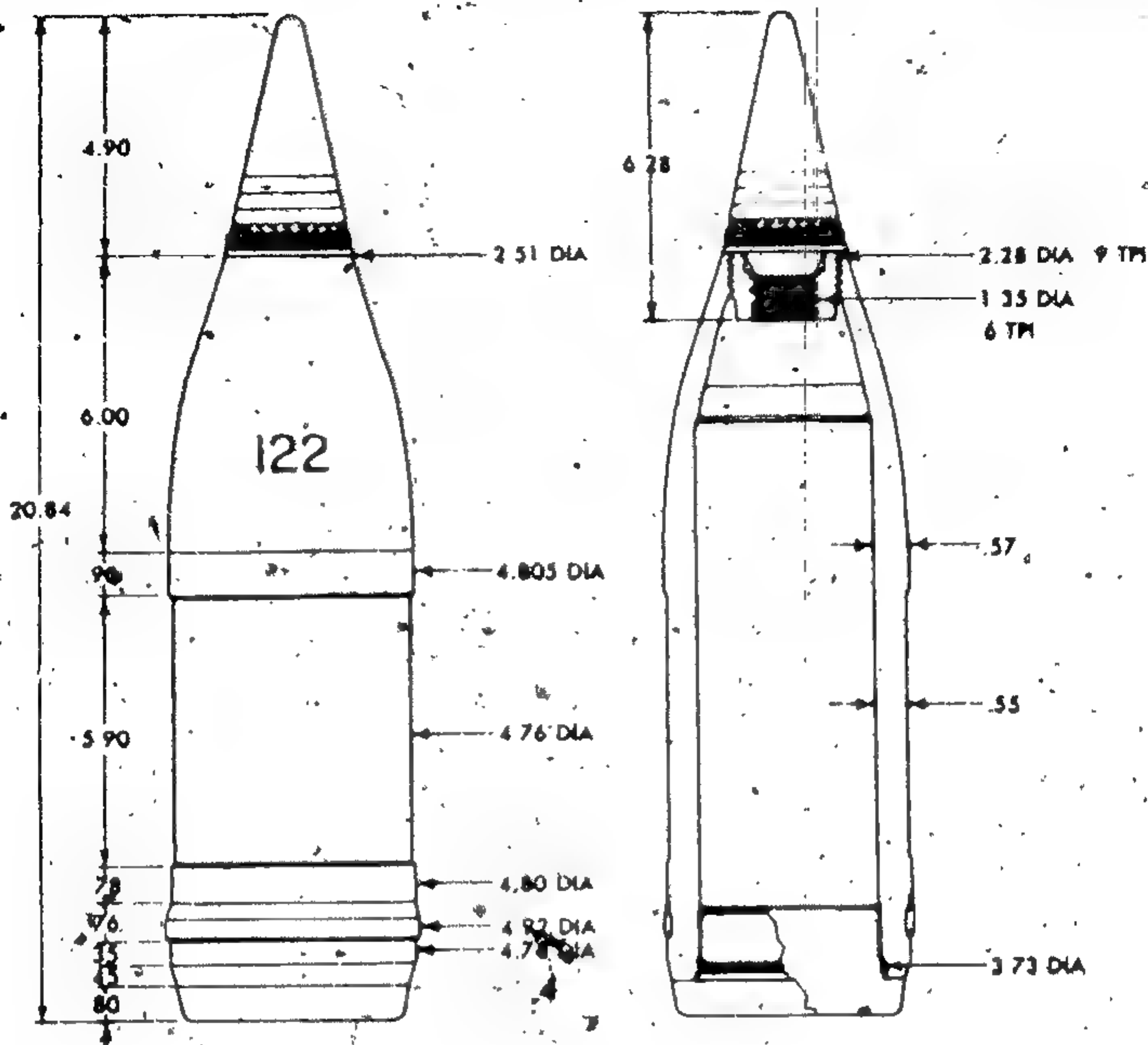
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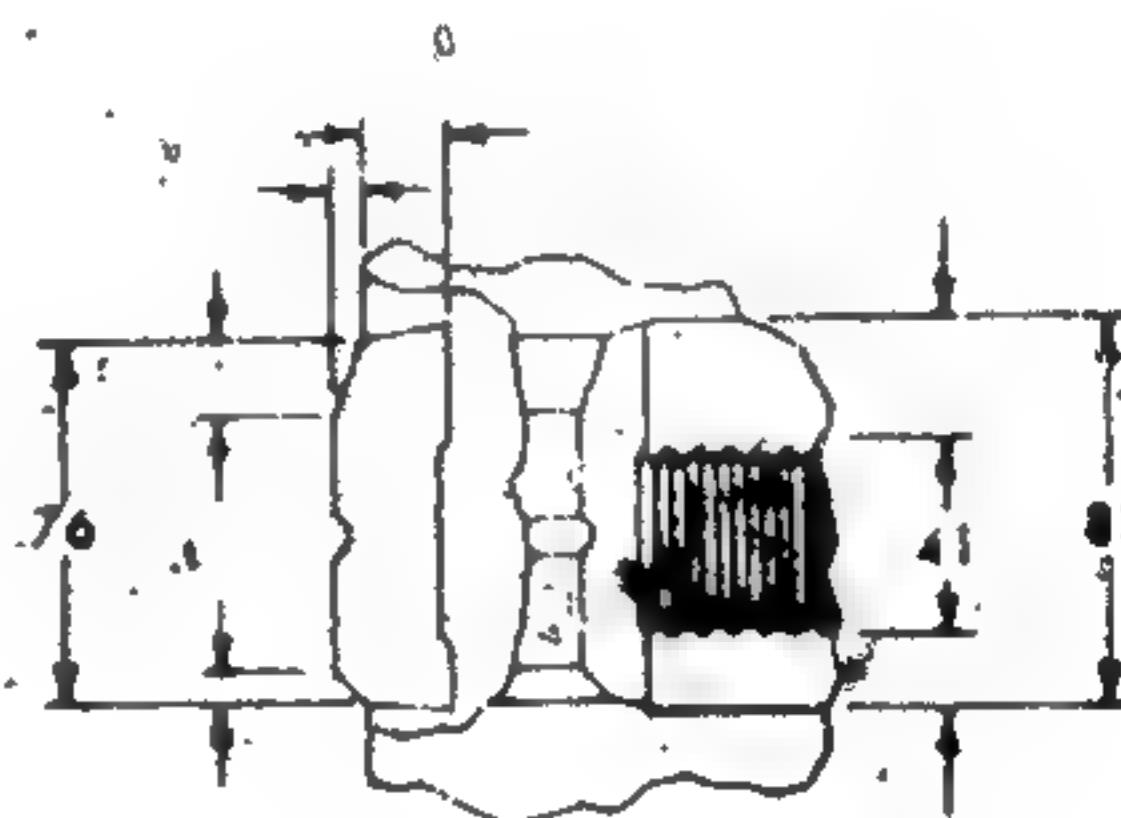
Original

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Neg. 502892

ALL DIMENSIONS IN INCHES



16 INDENTATIONS PER INCH

Caliber	122 mm	Ejection charge	Black powder
Identification	A-462	Fuze	Model T-6 ISO
Type	Propaganda	Known using	
Weight (fuzed)	50.00 lb (approx)	weapon	Howitzer M1938 (M-30)

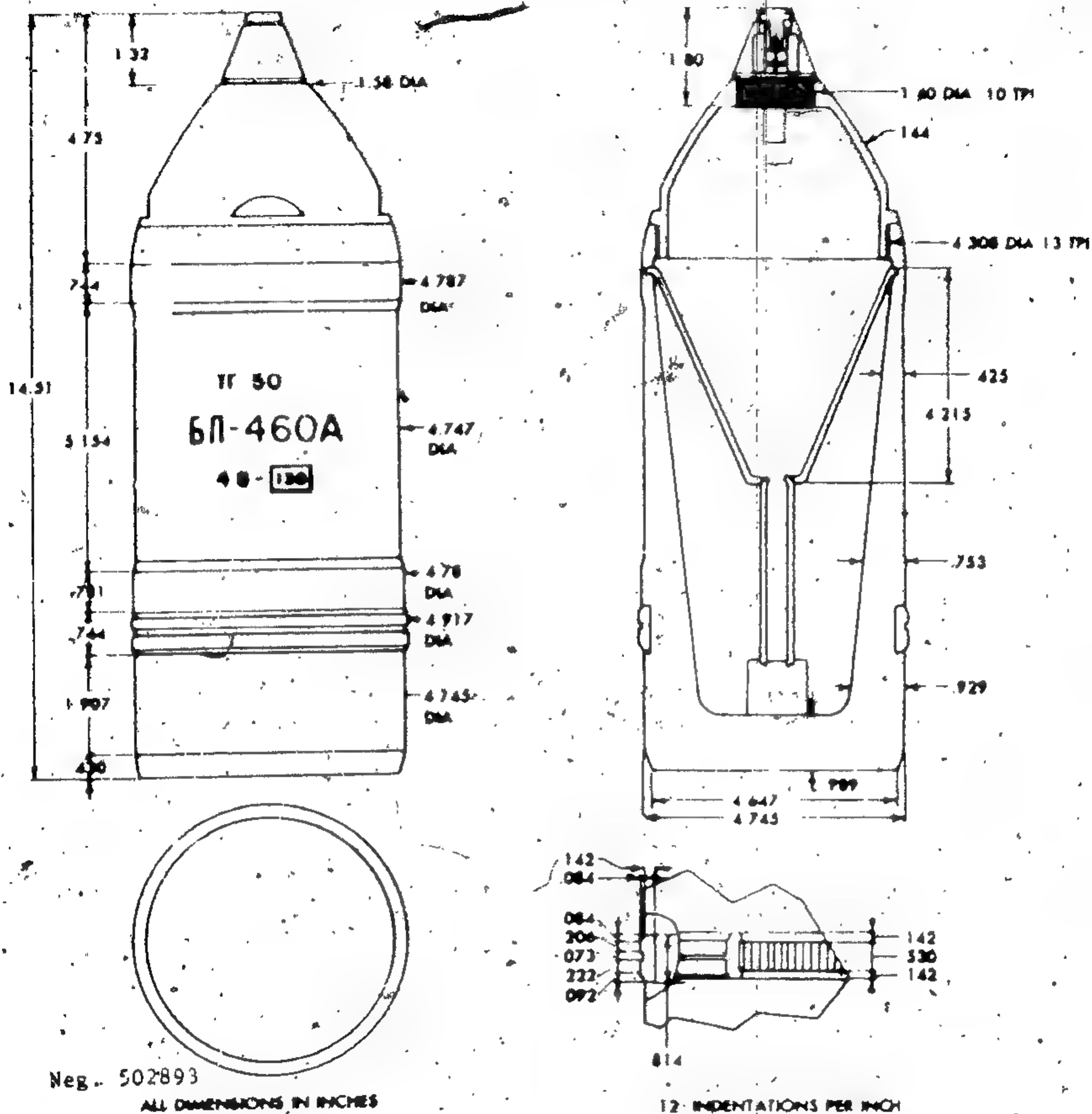
Figure 87. Soviet 122-mm propaganda projectile Model A-462.

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Caliber	122 mm	Bursting charge	3.14 lb RDX/TNT
Identification	BP-460A	Fuze	Model V-229 PIBD
Type	HEAT	Known using	
Weight (fuzed)	29.19 lb	weapons	Howitzers M1910/30 and M1938 (M-30)

Figure 88. Soviet 122-mm HEAT projectile Model BP-460A.

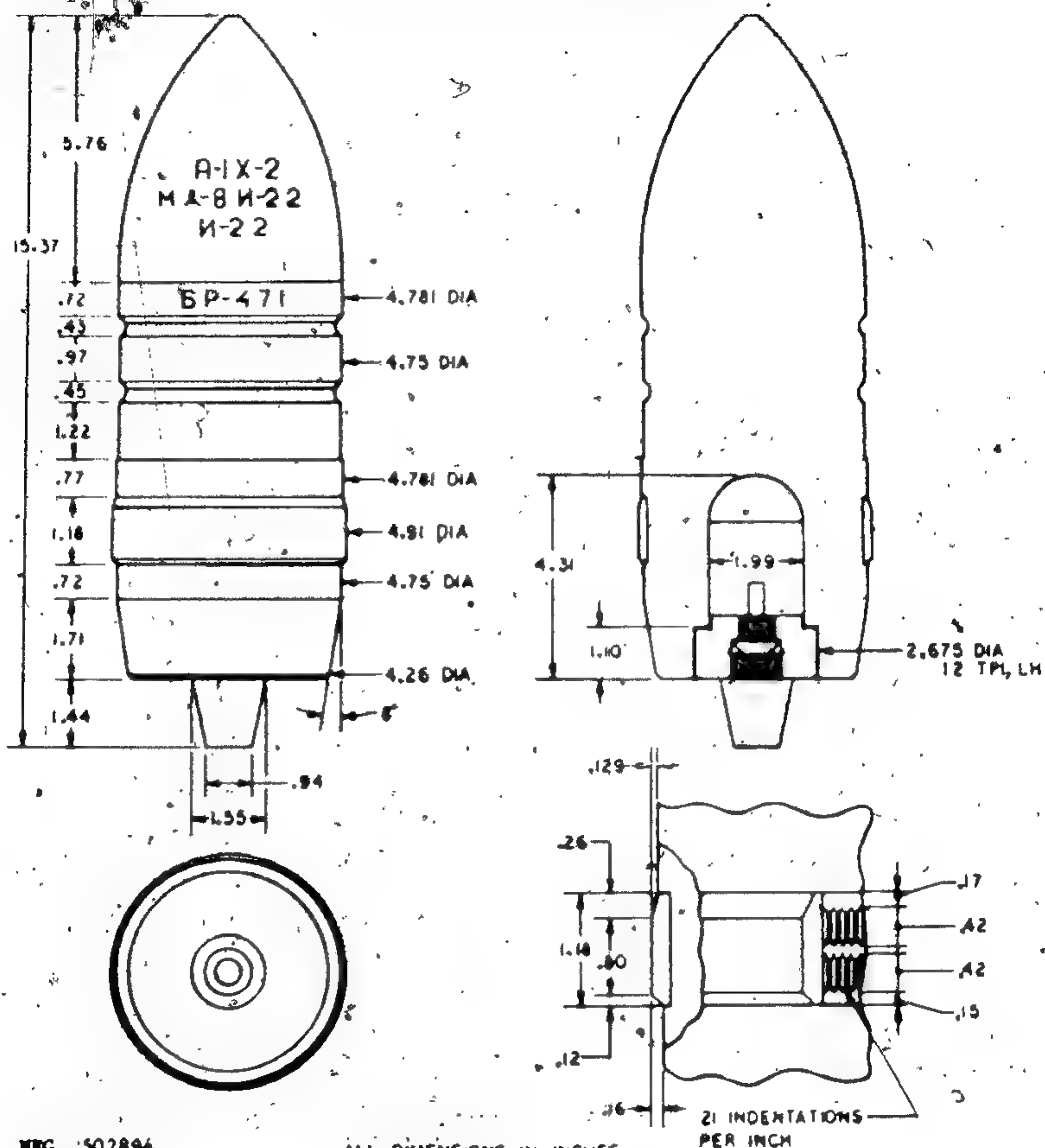
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REC- 502894

ALL DIMENSIONS IN INCHES

21 INDENTATIONS  
PER INCH

Caliber	122 mm
Identification	BR-471
Type	AP-T
Weight	55.63 lb
Bursting charge	0.36 lb RDX/ aluminum

Fuze ----- Model MD-8 base detonat-  
ing.

Known using  
weapons ----- Field guns M1931 and M19  
37 (A-19), tank gun M19  
(D-25), and SP assault  
guns M1944 (D-25S) and  
M1931/44 (A-19S)

Figure 89. 122-mm AP-T projectile Model BR-471.

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Original

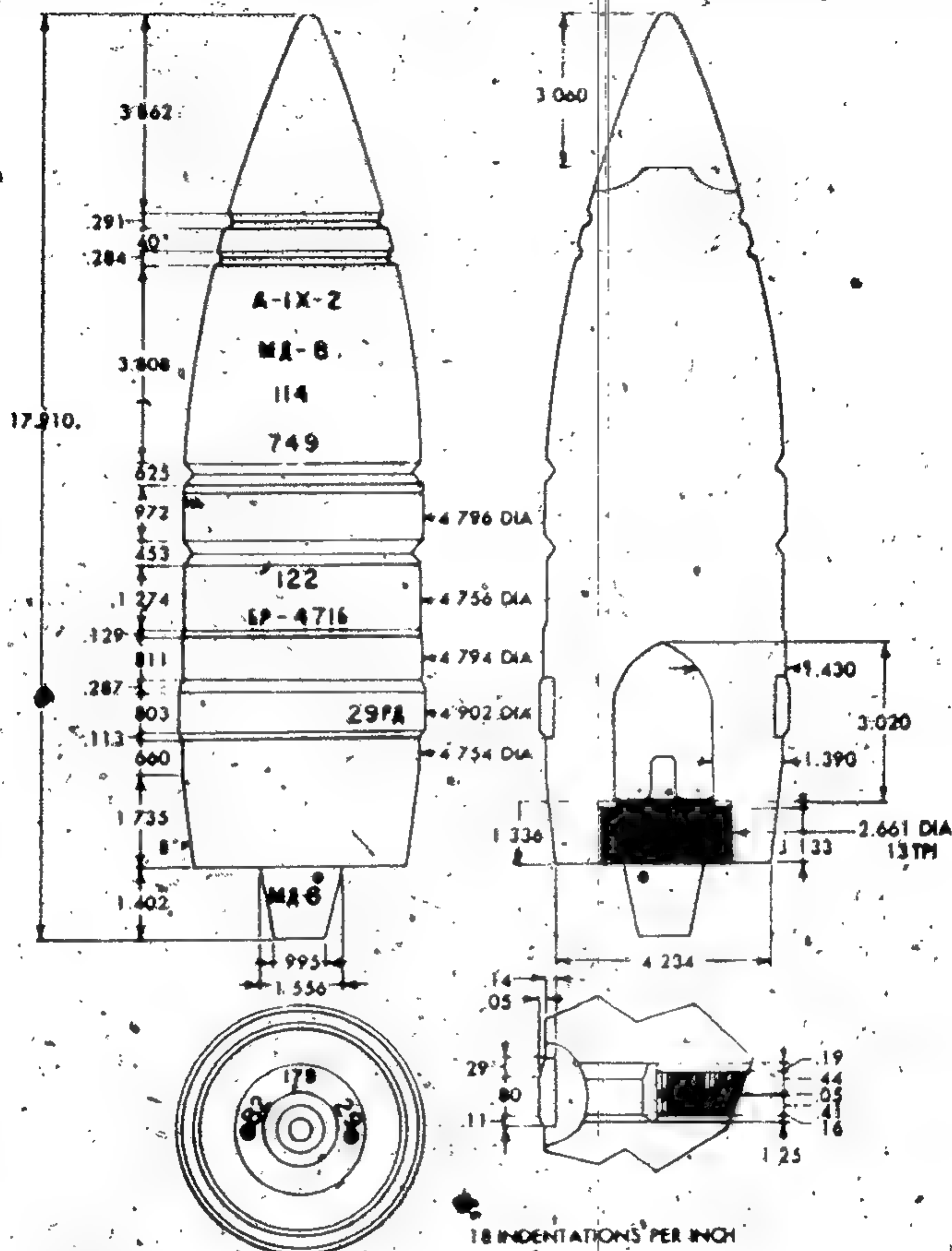


Fig. 502895

ALL DIMENSIONS IN INCHES

Caliber ----- 122 mm  
 Identification ----- BR-471B  
 Type ----- AP-T  
 Weight (fuzed) ----- 55.12 lb  
 Bursting charge ----- 0.36 lb  
 ----- RDX/aluminum  
 Fuze ----- Model MD-8 base  
 ----- detonating

Known using  
 weapons -----

Field guns M1931  
 and M1931/37 (A-19),  
 tank gun M1943,  
 (D-25), and SP  
 assault guns M1944  
 (D-25S) and M1931/44  
 (A-19S)

Remarks -----

Also uses Model DBR  
 base detonating fuze

Figure 90. Soviet 122-mm AP-T projectile Model BR-471B.

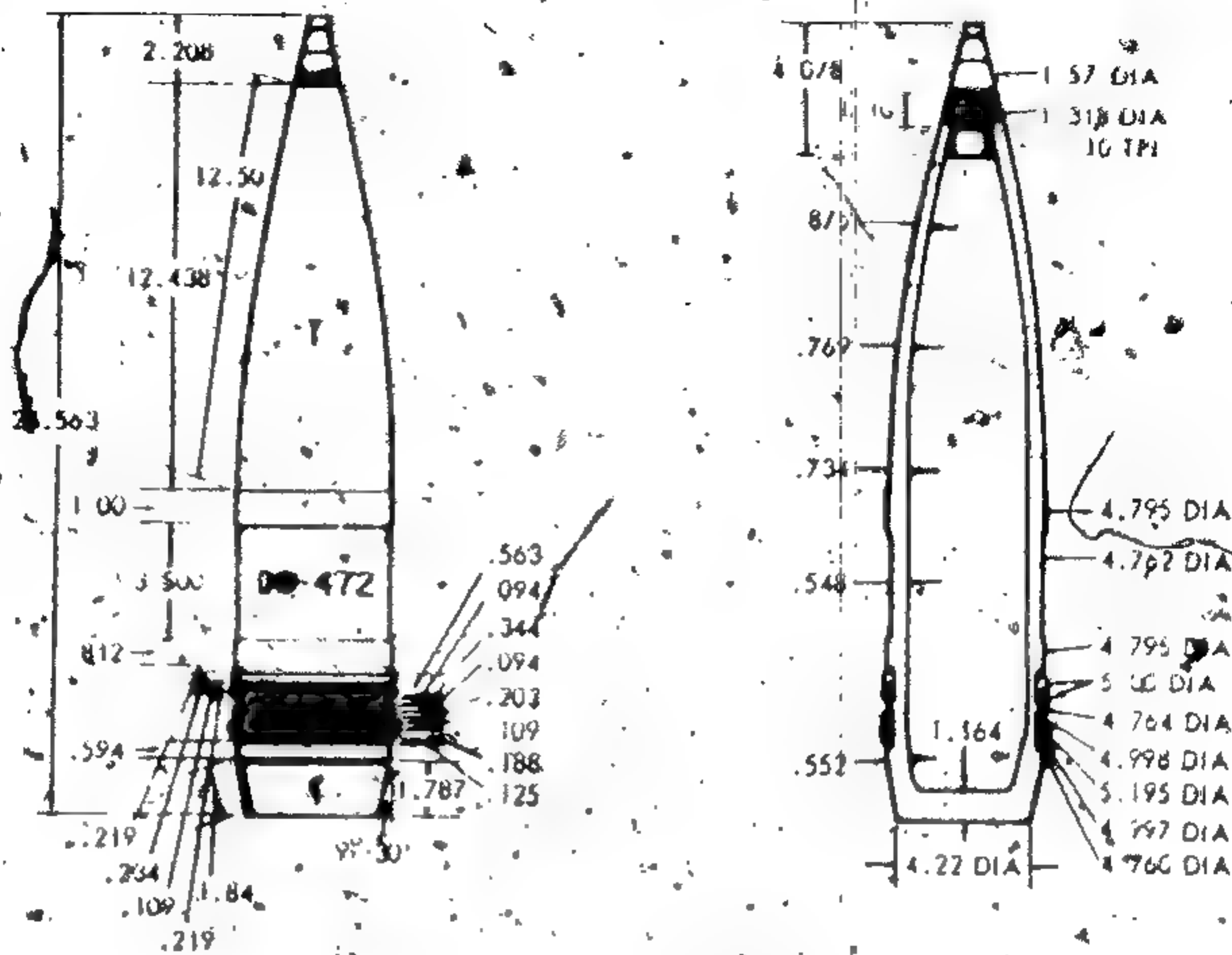
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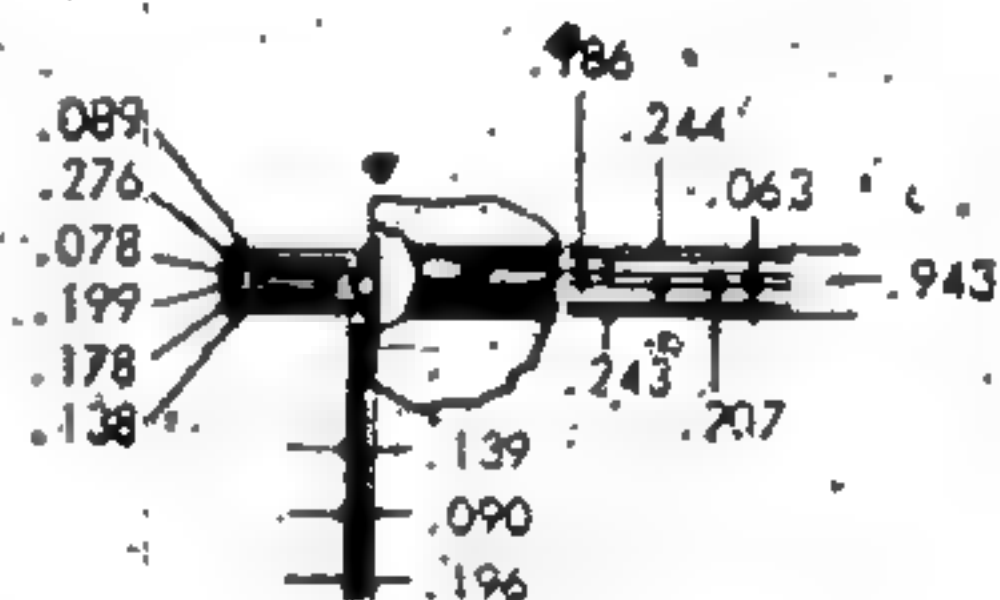
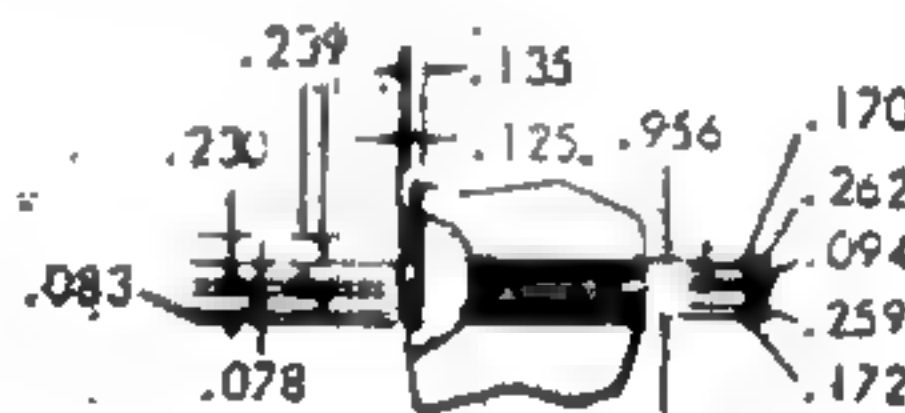
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FORWARD  
17 INDENTATIONS PER INCH



REAR  
17 INDENTATIONS PER INCH

ALL DIMENSIONS IN INCHES

502846

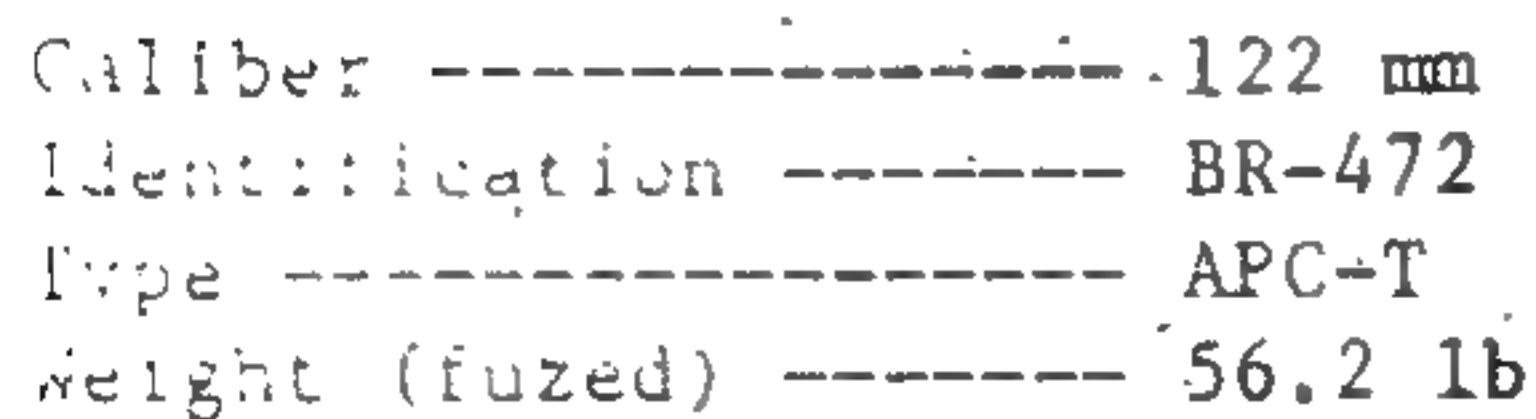
Caliber ----- 122 mm  
Identification ----- OF-472  
Type ----- Frag-HE  
Weight (fuzed) ----- 66.6 lb  
Bursting charge ----- 6.5 lb TNT

Fuze ----- Model V-429  
Known using  
weapon ----- Field gun D-74  
Remarks ----- RCM-series fuzes  
also may be used.

Figure 91. Soviet 122-mm frag-HE projectile Model OF-472.

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Bursting charge --- 0.2 lb RDX/aluminum  
Fuze ----- Model DBR base  
detonating  
Known using  
weapon ----- Field gun D-74

Figure 92. Soviet 122-mm APC-T projectile Model BR-472.

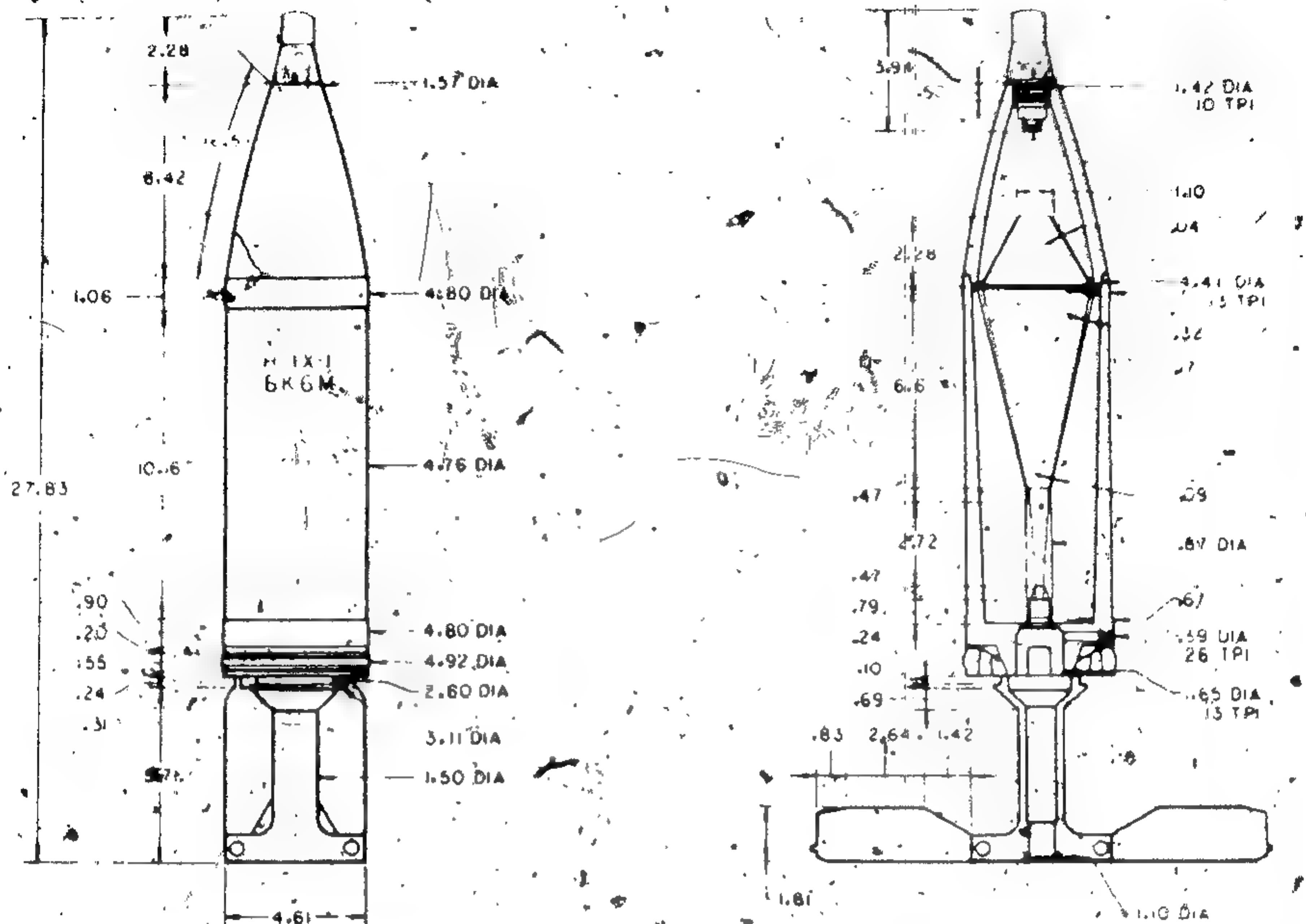
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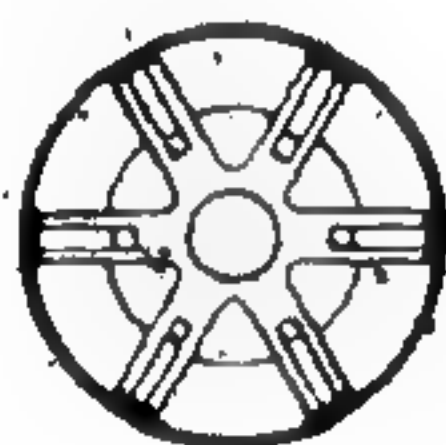
Original

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ALL DIMENSIONS IN INCHES

Neg. 502898



17 INDENTATIONS PER INCH

Caliber	122 mm	Fuze	Model CPV-2 point
Identification	BK-6M		initiating base
Type	HEAT		detonating.
Weight (fuzed)	47.65 lb	Known using	
Bursting charge	44.85 lb RDX	weapon	Howitzer D-30
		Remarks	Fuze is piezoelectric type.

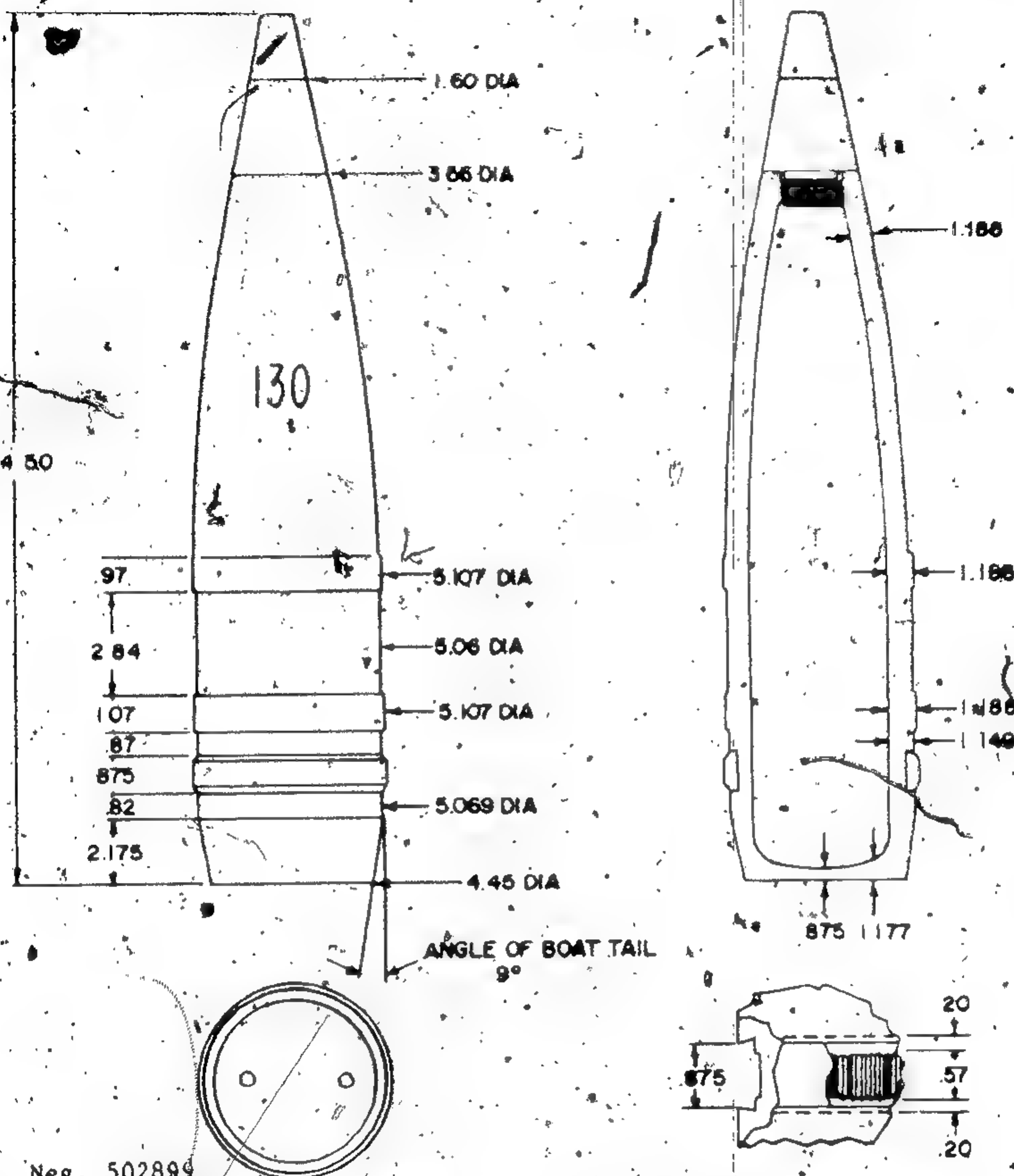
Figure 93. Soviet 122-mm HEAT projectile Model BK-6M.

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Original



Neg. 502899

ALL DIMENSIONS IN INCHES.

Caliber	-----	130 mm	Bursting charge	-----	(?) lb TNT
Identification	-----	Model (?)	Fuze	-----	Model (?)
Type	-----	Frag-HE			point
Weight (fuzed)	-----	74.00 lb			detonating
			Known using		
			weapon	-----	Naval gun M50

Figure 94. Soviet 130-mm frag-HE projectile Model (?).

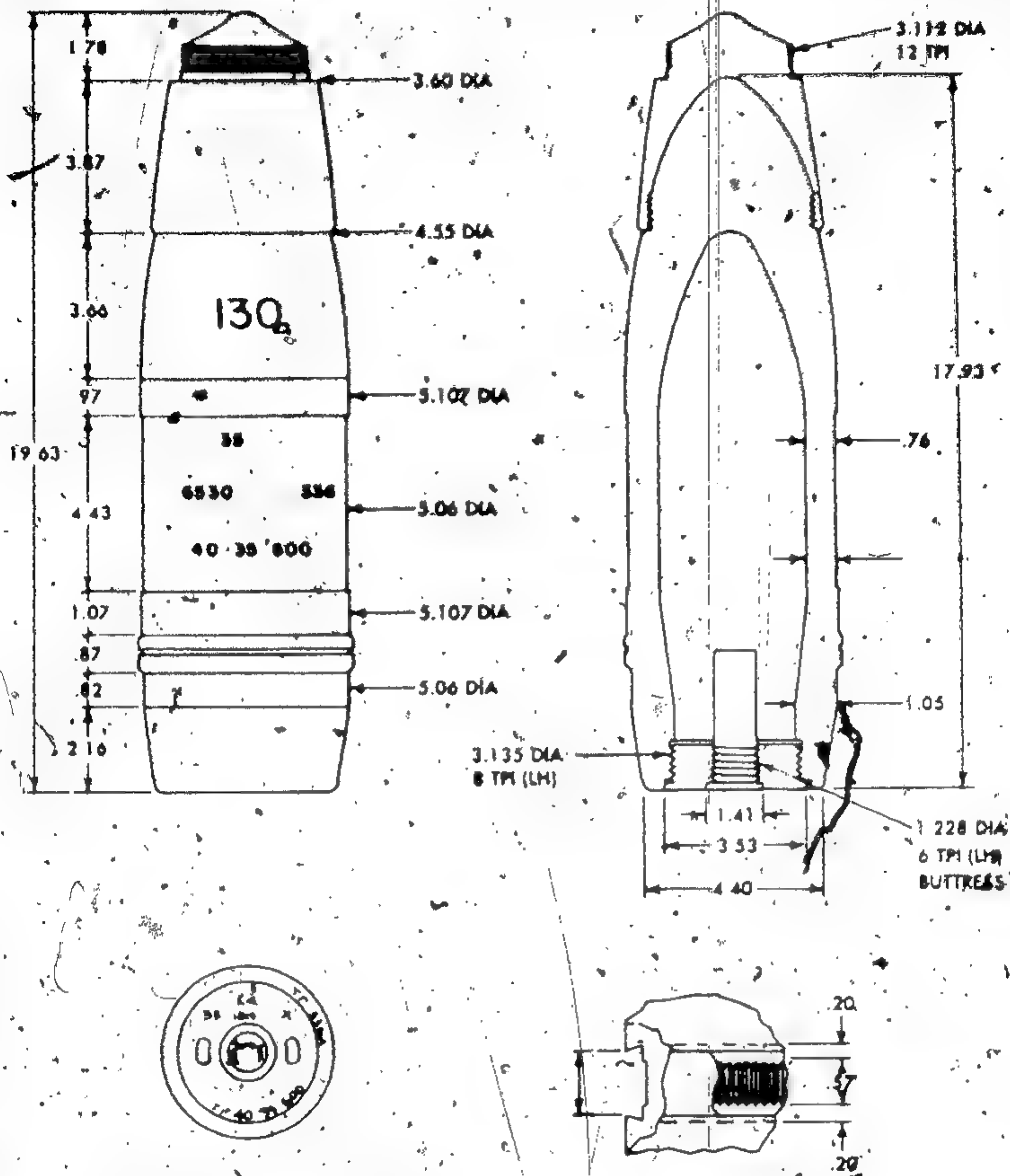
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Neg. 502900  
ALL DIMENSIONS IN INCHES

Caliber	130 mm
Identification	Model (?)
Type	APC
Weight (fuzed)	74.1 lb
Bursting charge	3.50 lb TNT
Fuze	Model MR-Z base detonating

17 INDENTATIONS PER INCH

Known using	weapon	Naval gun M50
Remarks		Projectile is illustrated without windshield.

Figure 95. Soviet 130-mm APC projectile Model (?)

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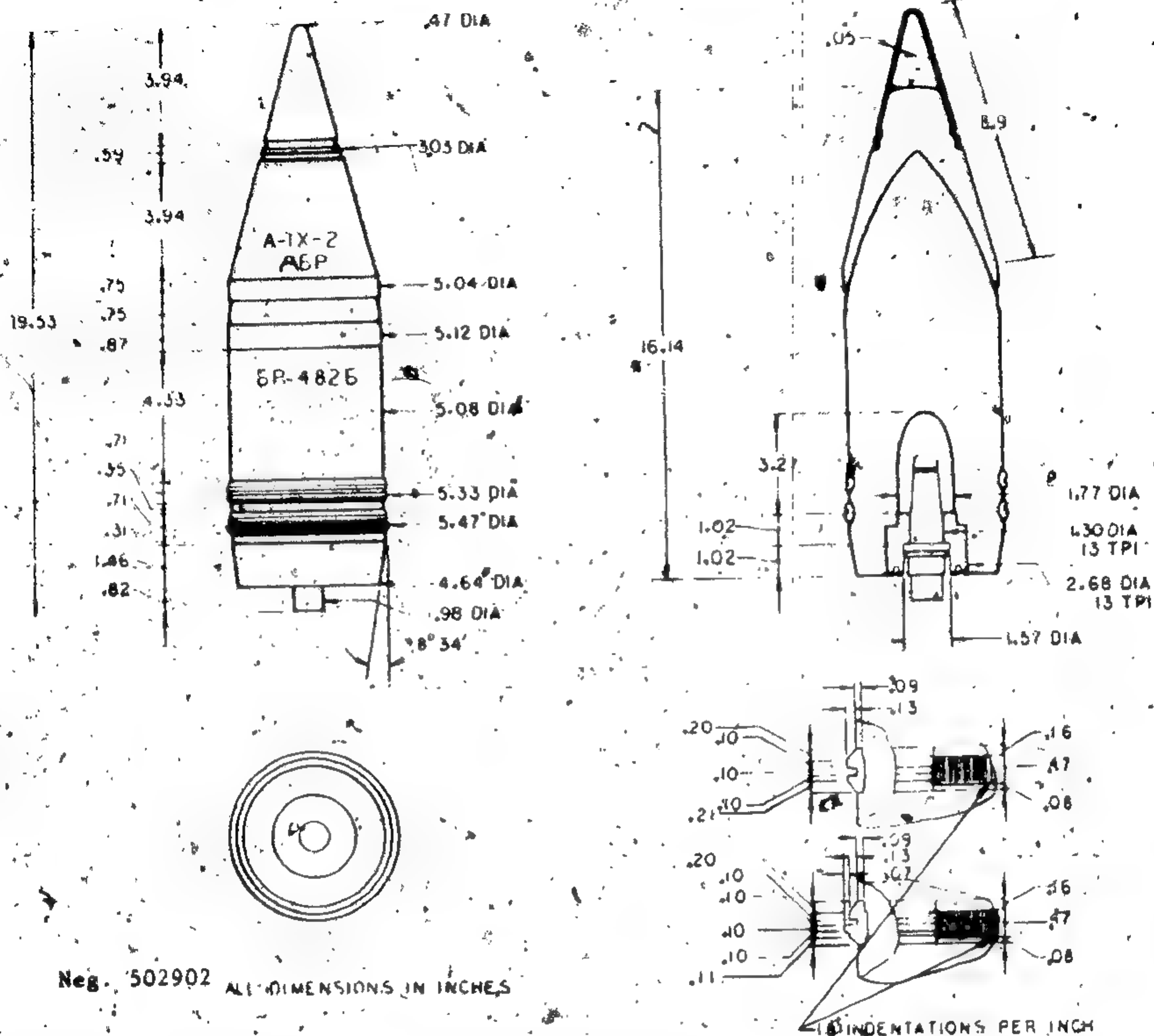




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Caliber	130 mm	Bursting charge	0.28 lb. RDX/ aluminum
Identification	BR-482B	Fuze	Model DBR base detonating
Type	APC-T	Known using weapon	Field gun M-46
Weight (fuzed)	73.77 lb		

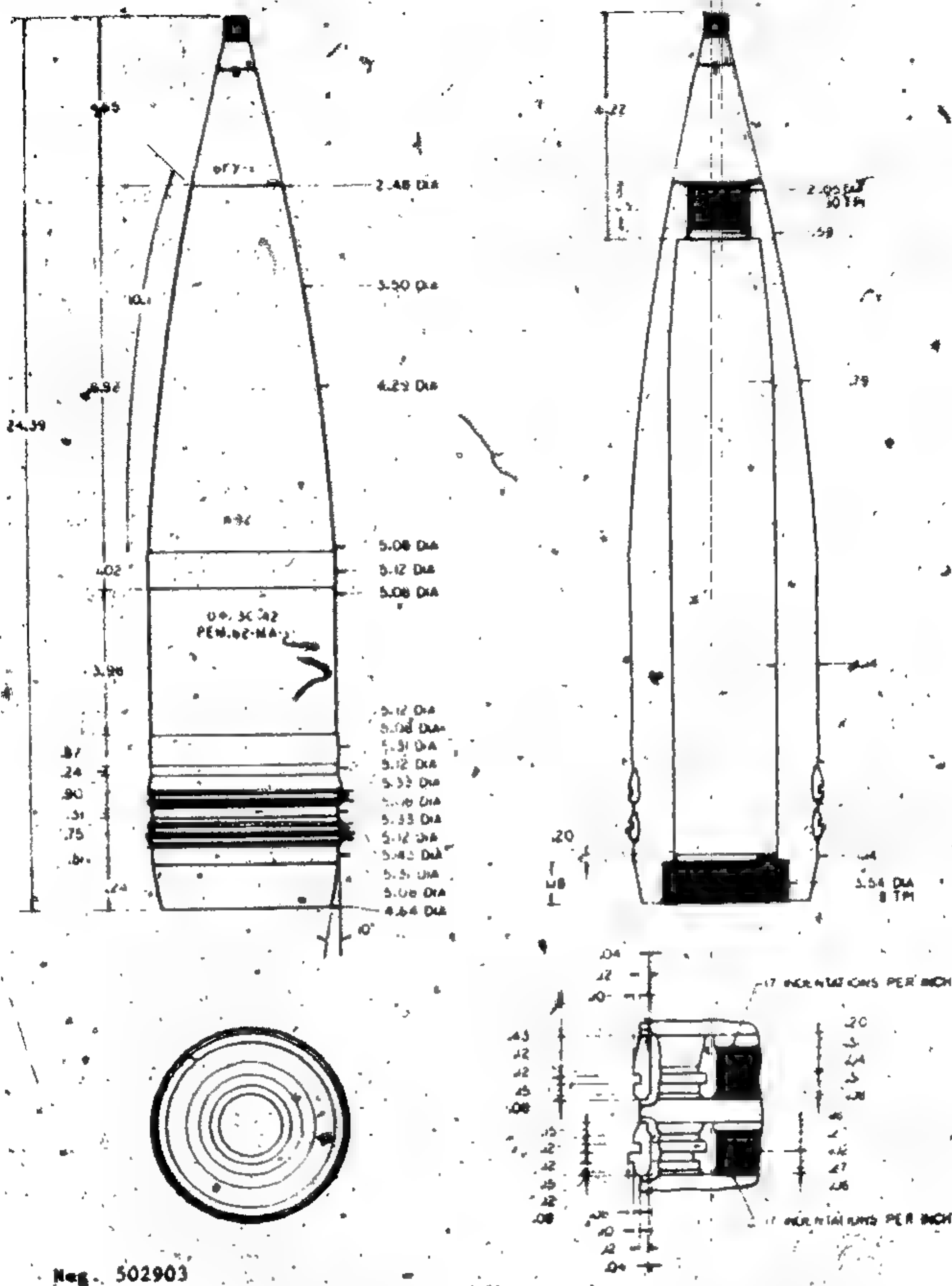
Figure 97. Soviet 130-mm APC-T projectile Model BR-482B.

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Original



Neg. 502903

ALL DIMENSIONS IN INCHES

Caliber	130 mm	Fuze	Model VCU-1 point detonating
Identification	OF-3S-42	Known using	Coastal gun M58
Type	Frag-HE	Remarks	Projectile also uses Model VM-60 mechanical time fuze.
Weight (fuzed)	73.7 lb		
Bursting charge	(?) lb TNT		

Figure 98. Soviet 130-mm frag-HE projectile Model OF-3S-42.

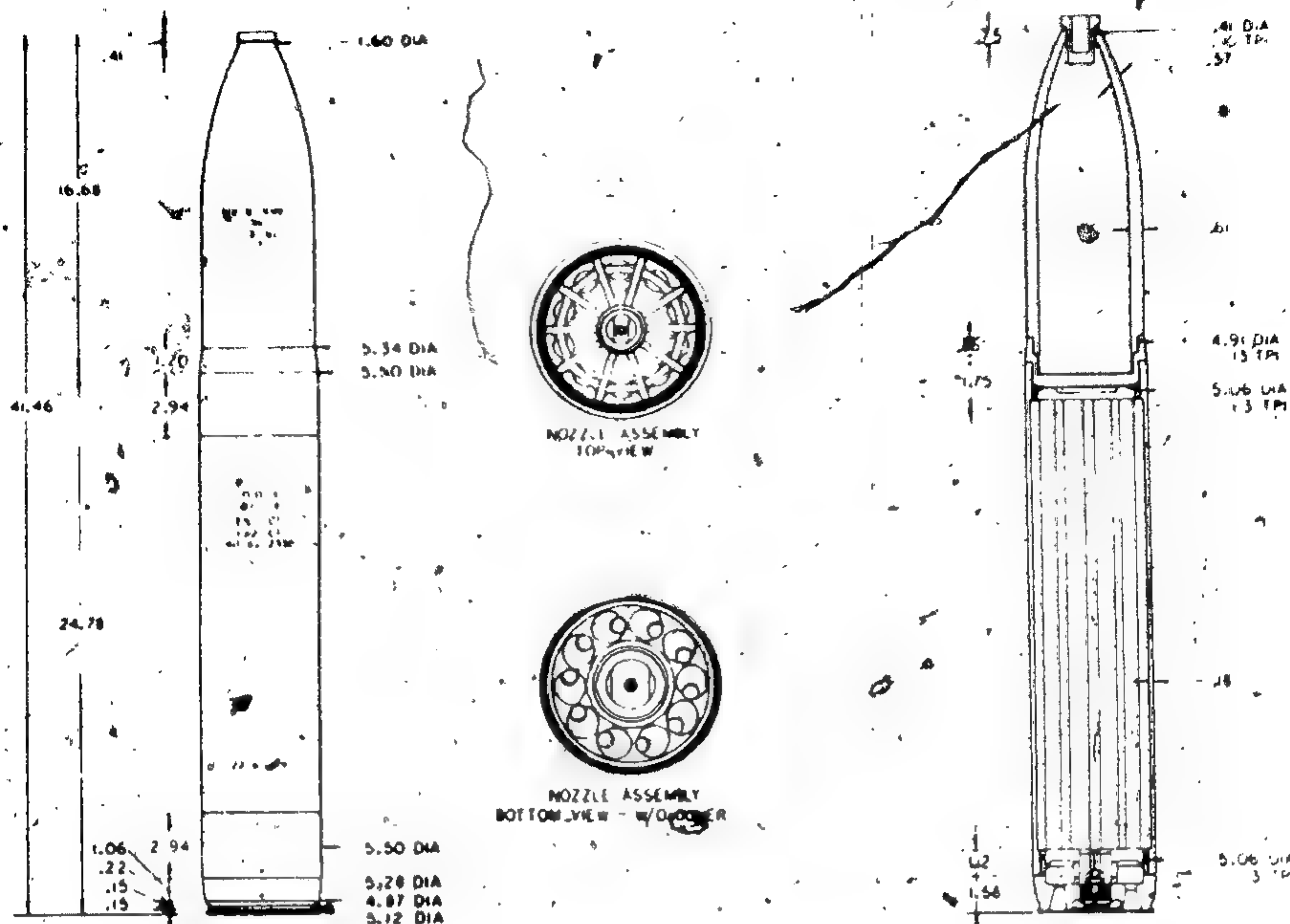
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Neg. 502904

ALL DIMENSIONS IN INCHES

Caliber	140 mm	Known using	
Identification	M-14-OF	weapons	Truck mounted
Type	Frag-HE		BM-14-16 and
Weight (fuzed)	87.35 lb		BM-14-17
Bursting charge	8.10 lb		multiple launchers
	TNT		and a 16-rd towed
Fuze	Model		launcher
	V-25	Remarks	Fuze has two delay
	point		options.
	detonating		

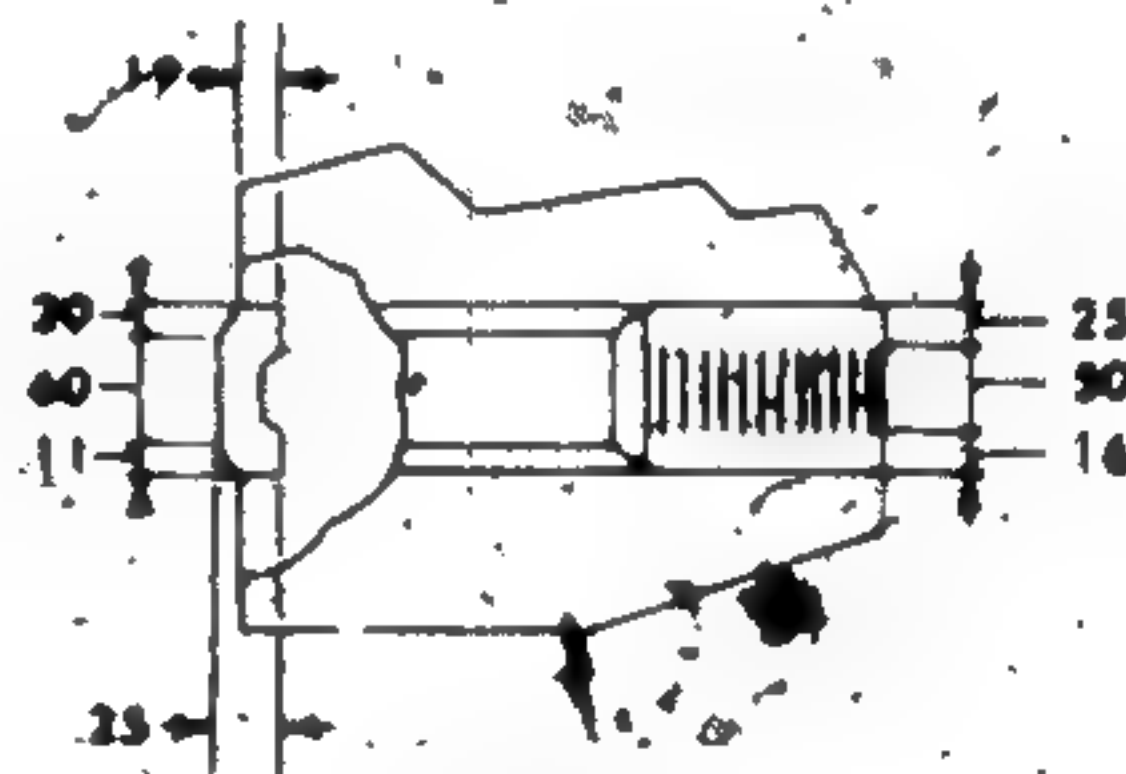
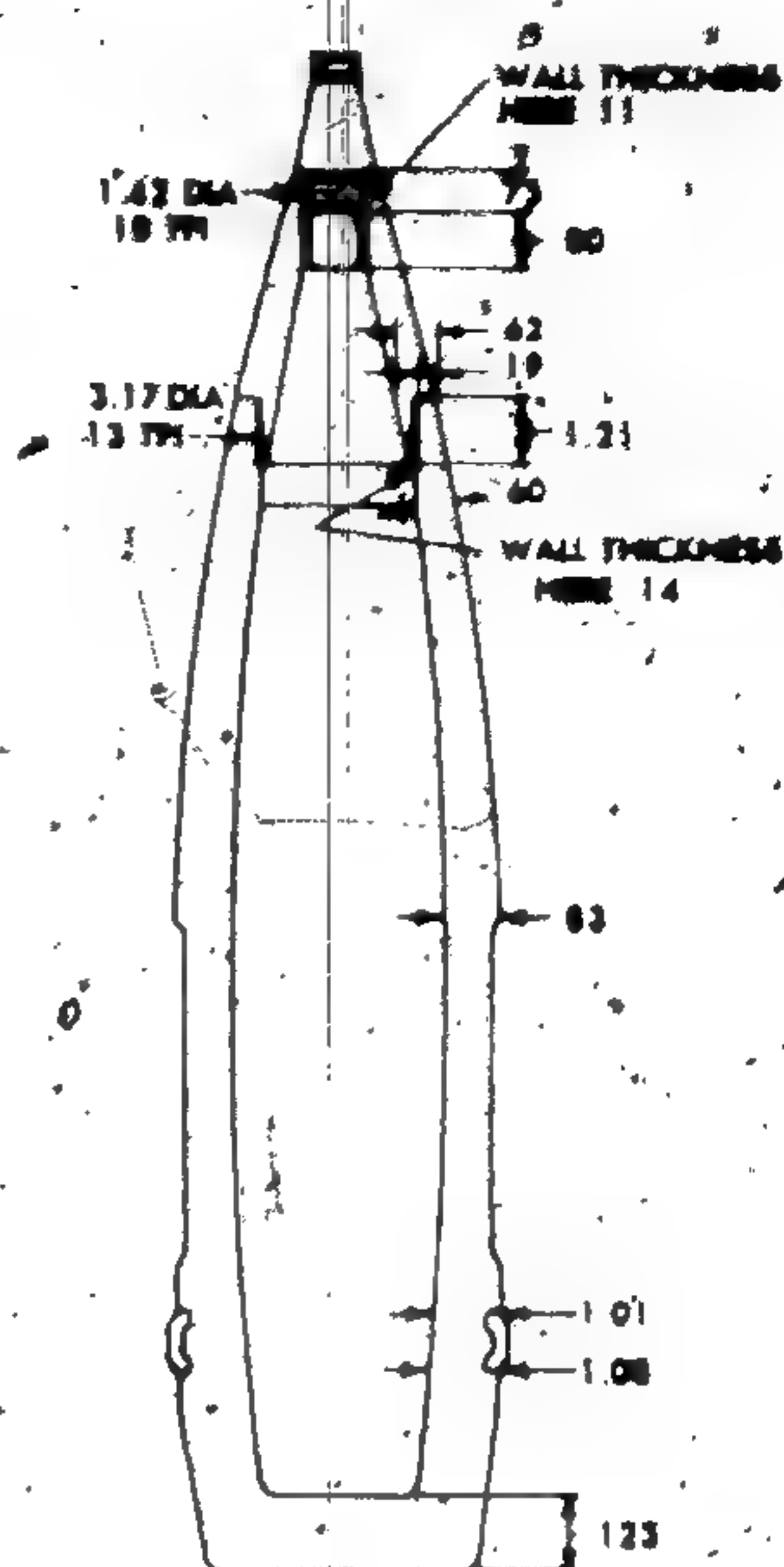
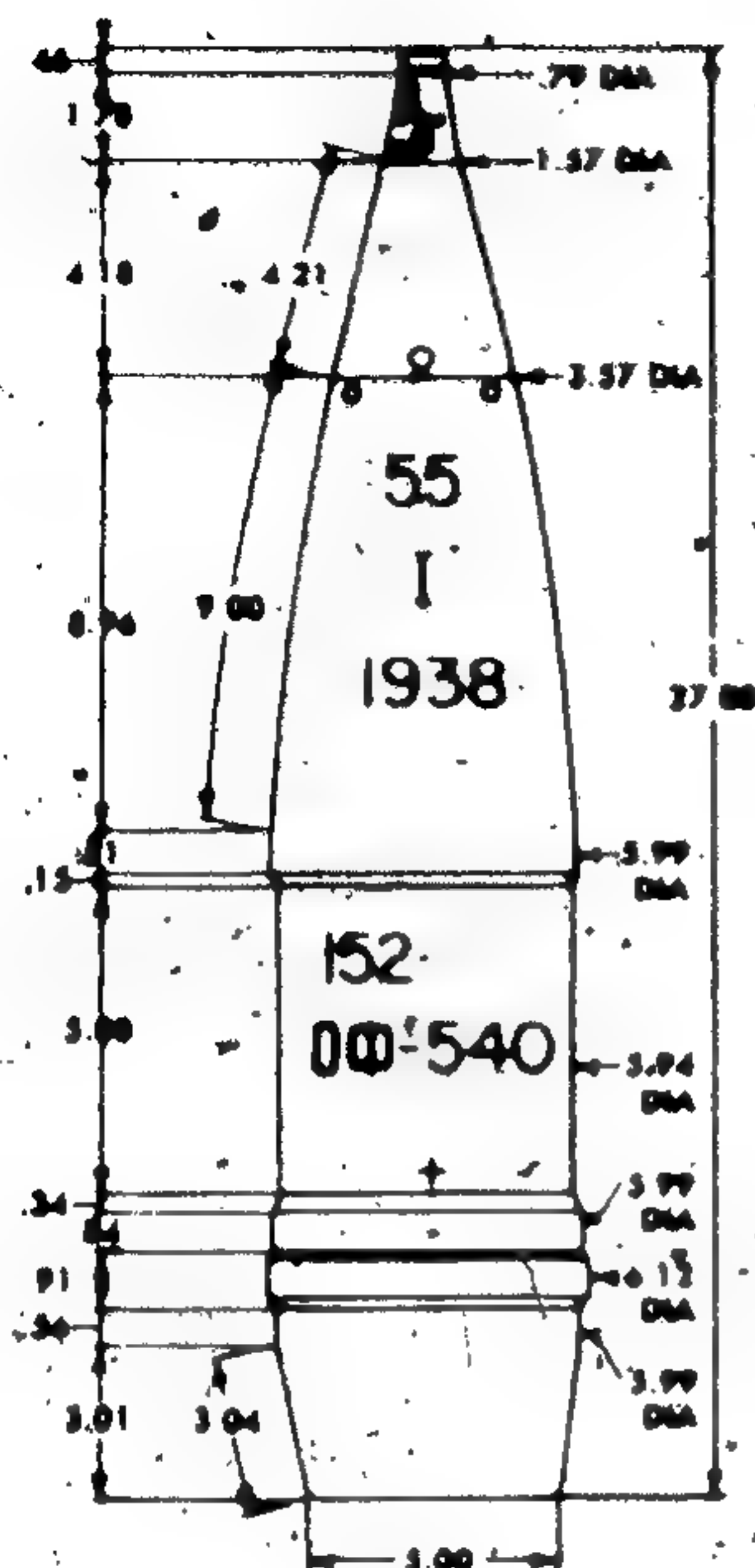
Figure 99. Soviet 140-mm frag-HE projectile Model M-14-OF.

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Neg. 502905

ALL DIMENSIONS IN INCHES

12 INDENTATIONS PER INCH

Caliber ----- 152 mm  
 Identification ----- OF-540  
 Type ----- Frag-HE  
 Weight (fuzed) ----- 96.50 lb  
 Bursting charge ----- 14.25 lb TNT  
 Fuze ----- Model RGM  
 point  
 detonating  
 Known using  
 weapons ----- Guns MI910/34

(Continued) ----- and MI935 (BR-2), gun-  
 howitzer MI937 (ML-20),  
 and SP assault gun  
 ML937/43 (ML-20S)  
 Remarks ----- Also uses Models RGM-2  
 and RG-6 point detonating  
 fuzes and Model D-1 time  
 and superquick fuzes.  
 Projectile is of two-  
 piece design.

Figure 100. Soviet 152-mm frag-HE projectile Model OF-540 (two-piece).

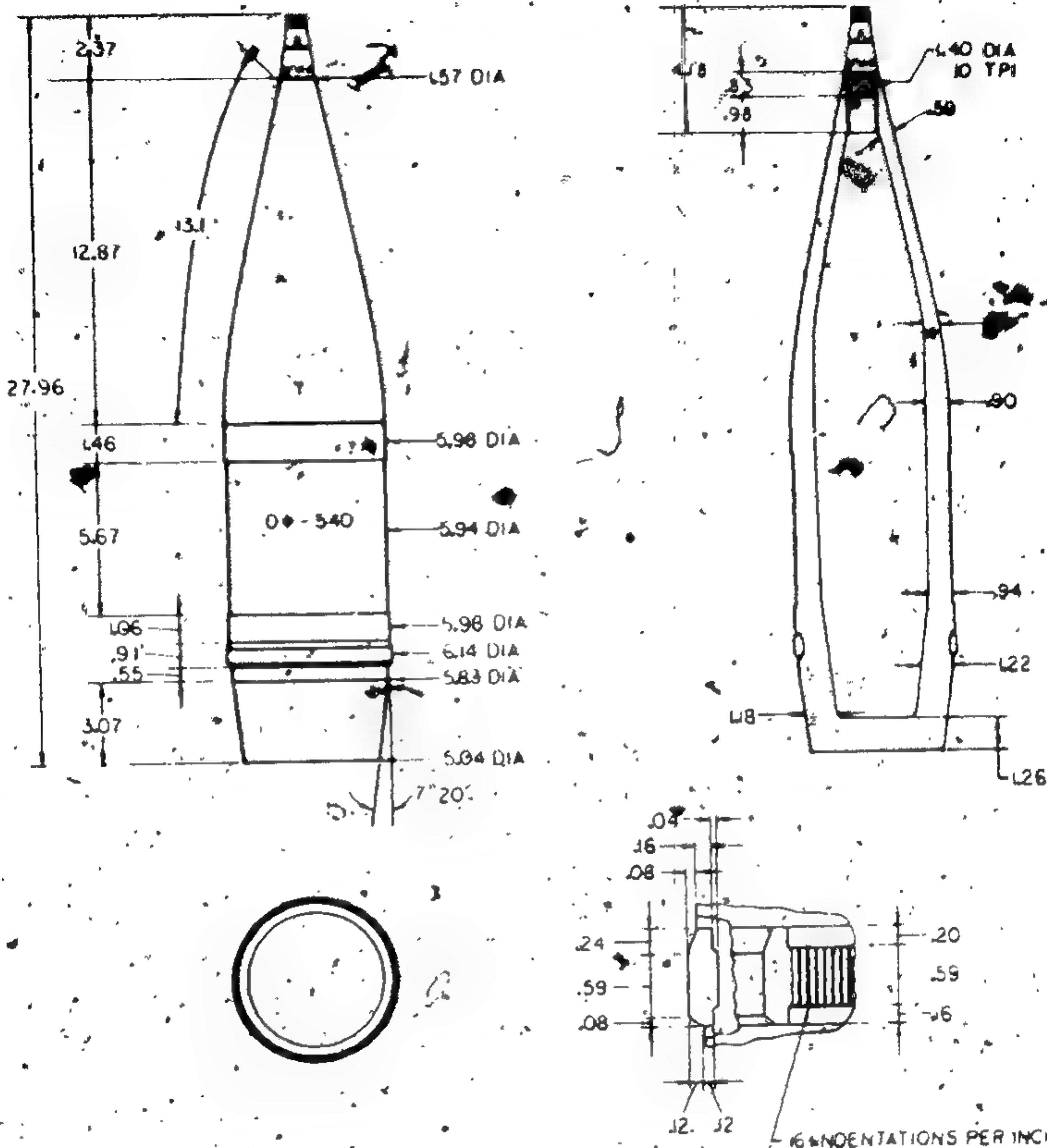
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Original

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Neg. 502906

ALL DIMENSIONS IN INCHES

Caliber	152 mm	(Continued)	and M1935 (BR-2), gun-
Identification	OF-540		howitzer M1937 (ML-20),
Type	Frag-HE		and SP assault gun
Weight (fuzed)	95.83 lb		M1937/43 (ML-20S)
Bursting charge	12.7 lb TNT	Remarks	There is also a two-
Fuze	Model RGM-2		piece design projectile
	point		with the same model
	detonating		designation.
Known using			
weapons	Gun M1910/34		

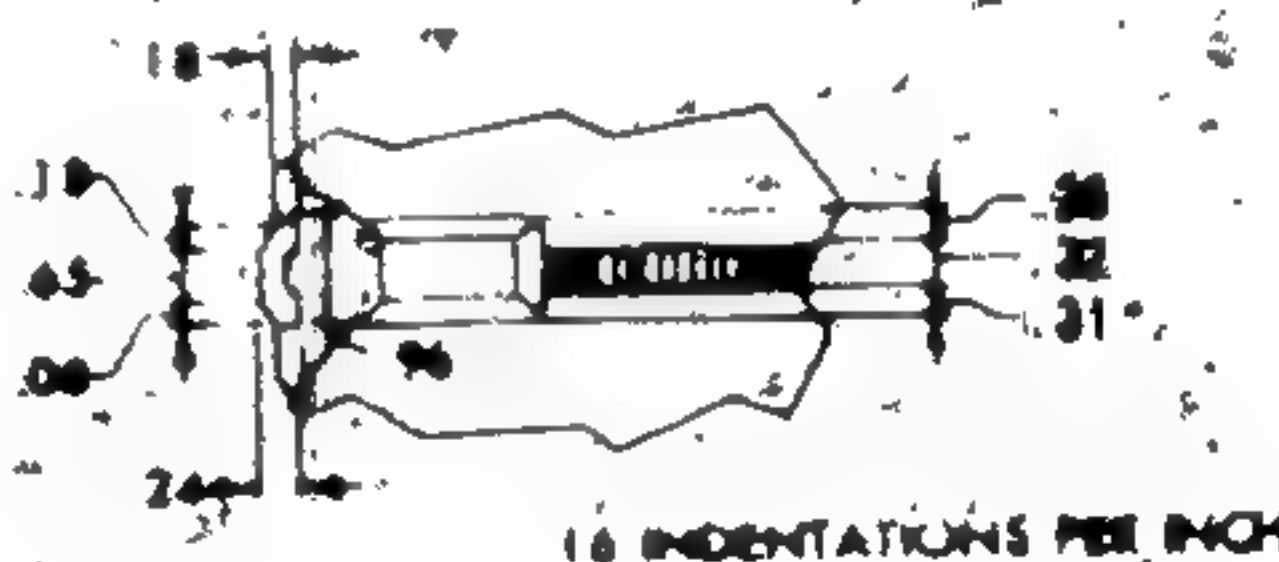
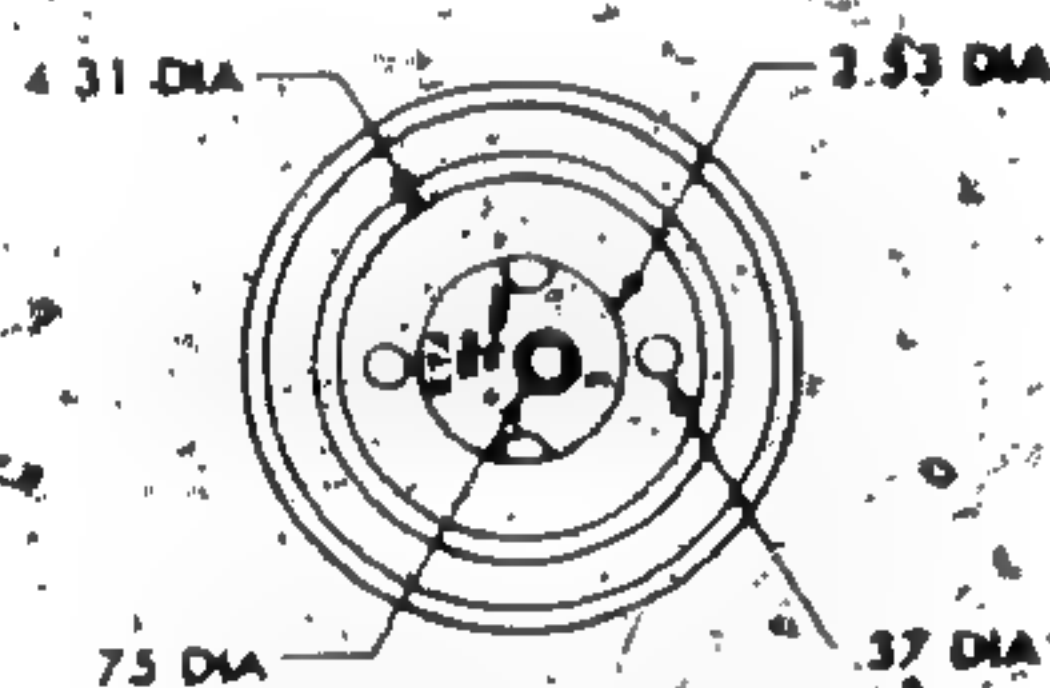
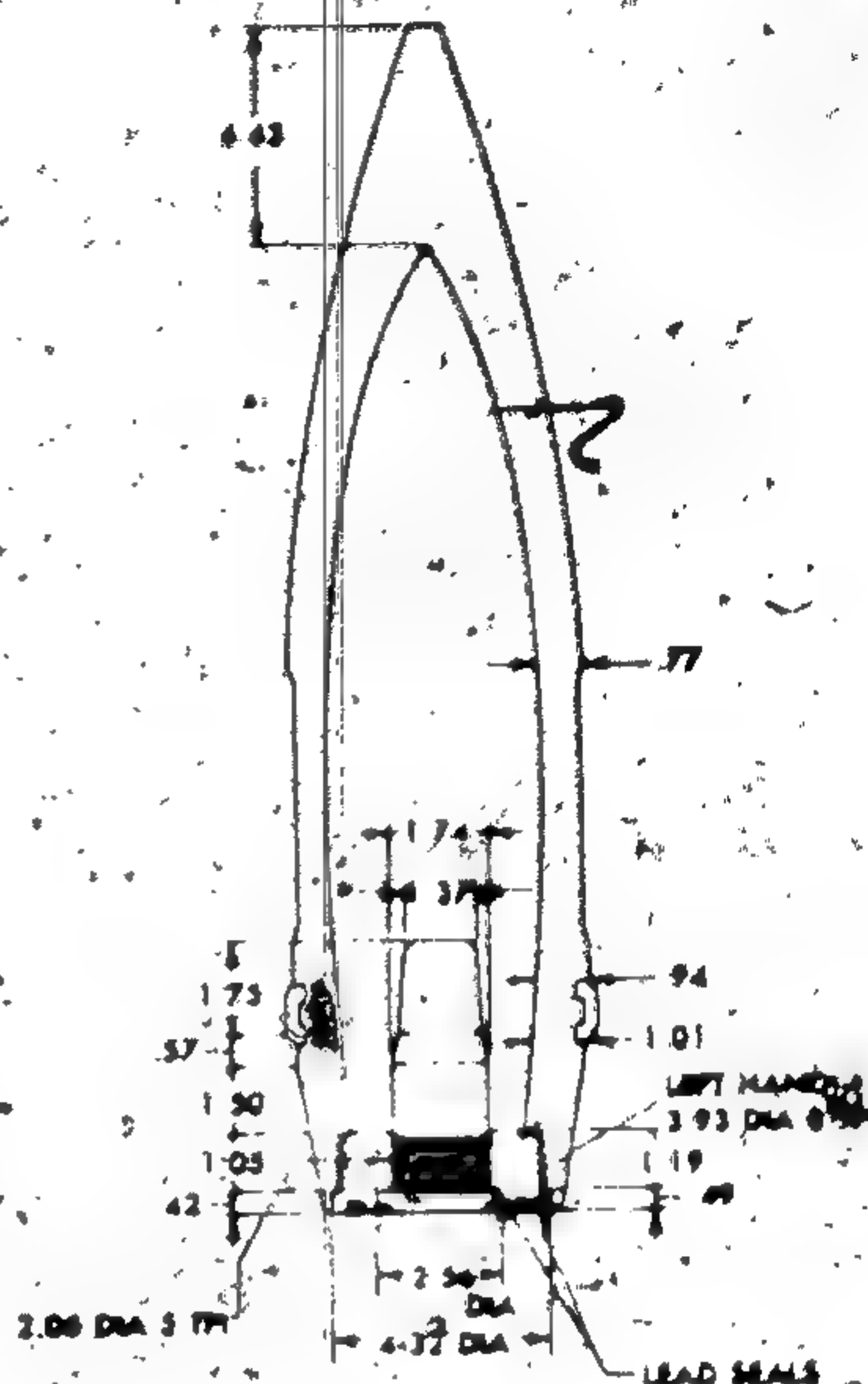
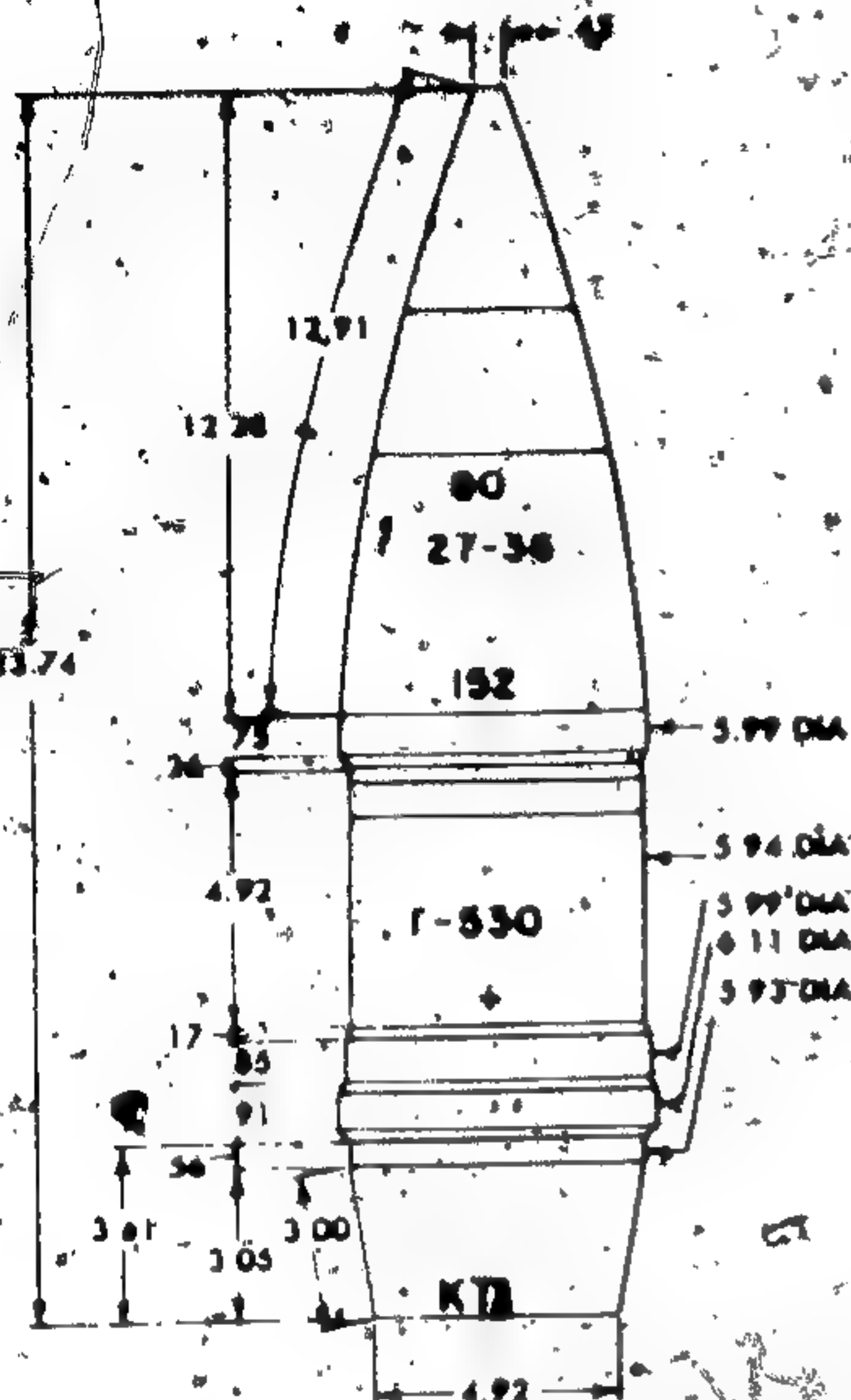
Figure 101. Soviet 152-mm frag-HE projectile Model OF-540.

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Neg. 502907 ALL DIMENSIONS IN INCHES

Caliber	152 mm
Identification	G-530
Type	CP
Weight (fuzed)	88.20 lb
Bursting charge	11.25 lb TNT
Fuze	Model KTD base detonating
Known using weapons	Howitzers

(Continued)

MI909/30, MI938 (M-10), and MI943 (D-1); guns MI910/34 and MI935 (BR-2); gun-howitzer MI937 (ML-20); and SP assault gun MI937/43 (ML-20S). Also uses Model KTD-2 base detonating fuze.

Figure 102. Soviet 152-mm CP projectile Model G-530.

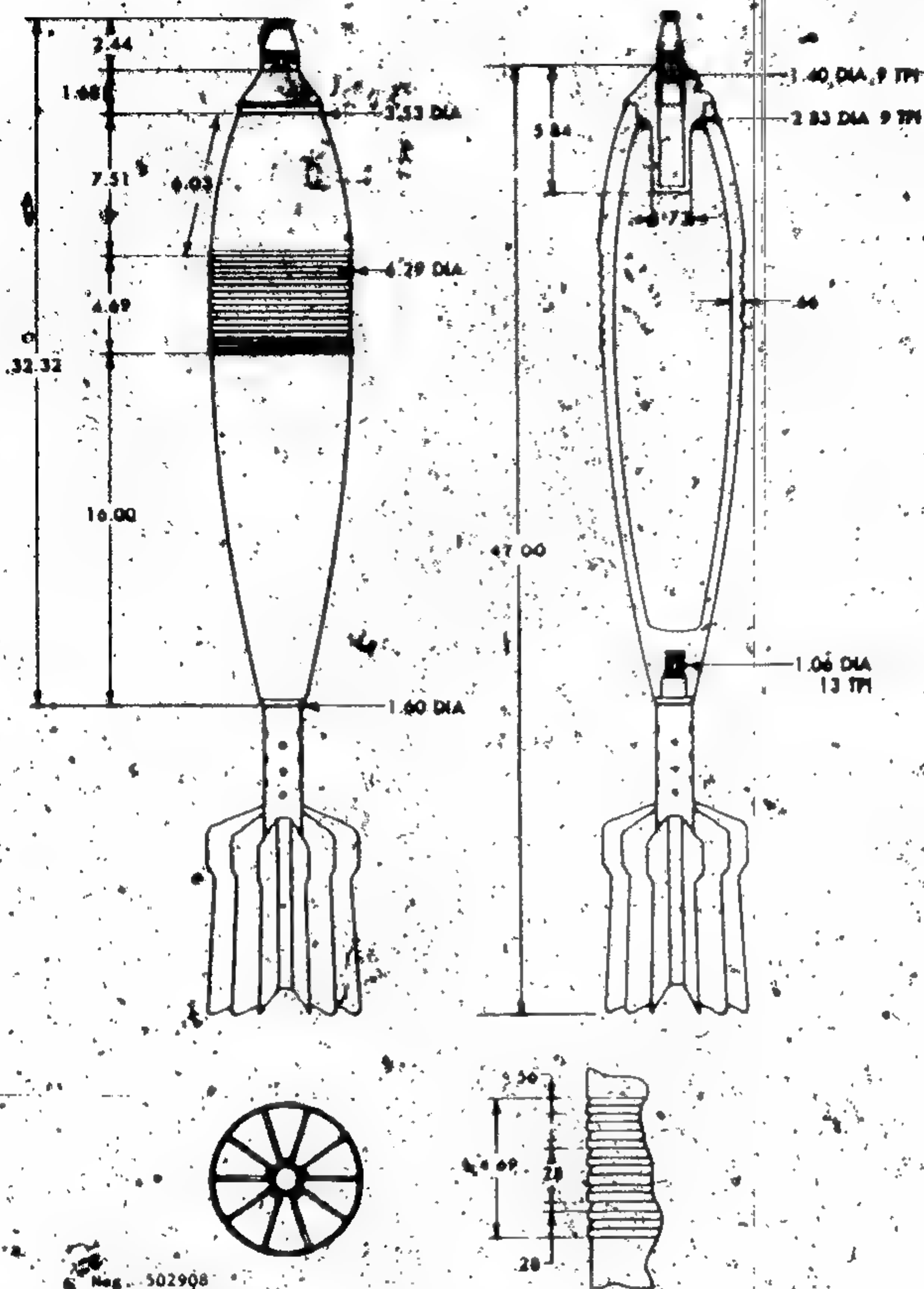
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ALL DIMENSIONS IN INCHES

Caliber	160 mm	Bursting charge	16.28 lb TNT
Identification	F-852	Fuze	Model GVMZ-7
Type	HE		point
Weight	88.00 lb		detonating
		Known using	
		weapons	Mortar M1943

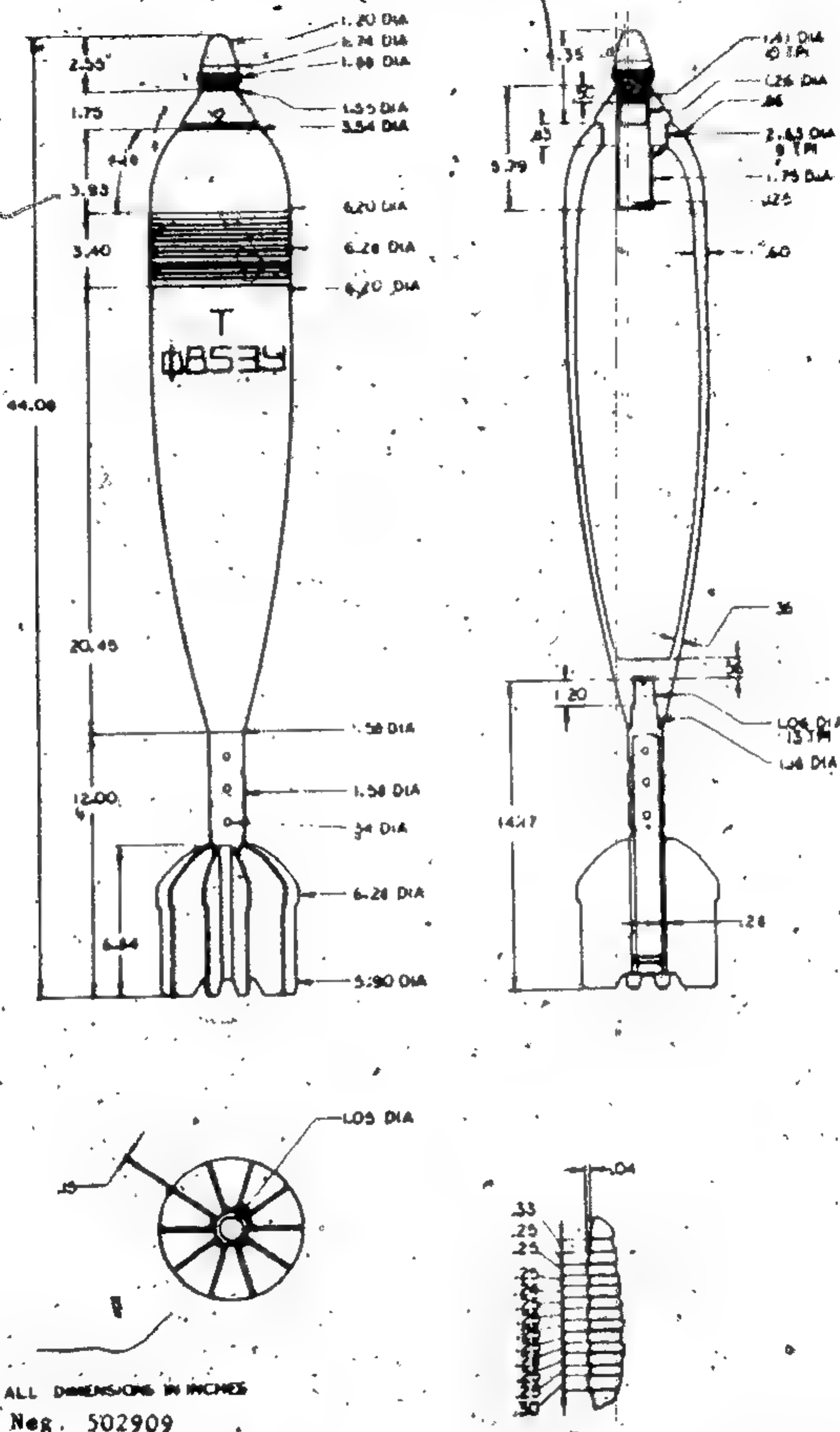
Figure 103. Soviet 160-mm HE projectile Model F-852.

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Caliber ----- 160 mm

Identification ----- F-853U

Type ----- HE

Weight (fuzed) ----- 90.70 lb

Bursting charge ----- 19.80 lb TNT

Fuze ----- Model GVMZ-7 point  
detonating

Known using  
weapon ----- Mortar M160

Remarks ----- Projectile is steel.  
Fuze shown with  
shipping cap on.

Figure 103a. Soviet 160-mm HE projectile Model F-853U.

# UNCLASSIFIED



Original

[illegible]

Caliber	160 mm
Identification	F-853A
Type	HE
Weight (fuzed)	90.70 lb
Bursting charge	17.03 lb
	amatol
Fuze	Model GVM2-7
	point
	detonating

Known using	
weapon	Mortar M160
Remarks	Projectile is cast iron. Fuze shown with shipping cap on.

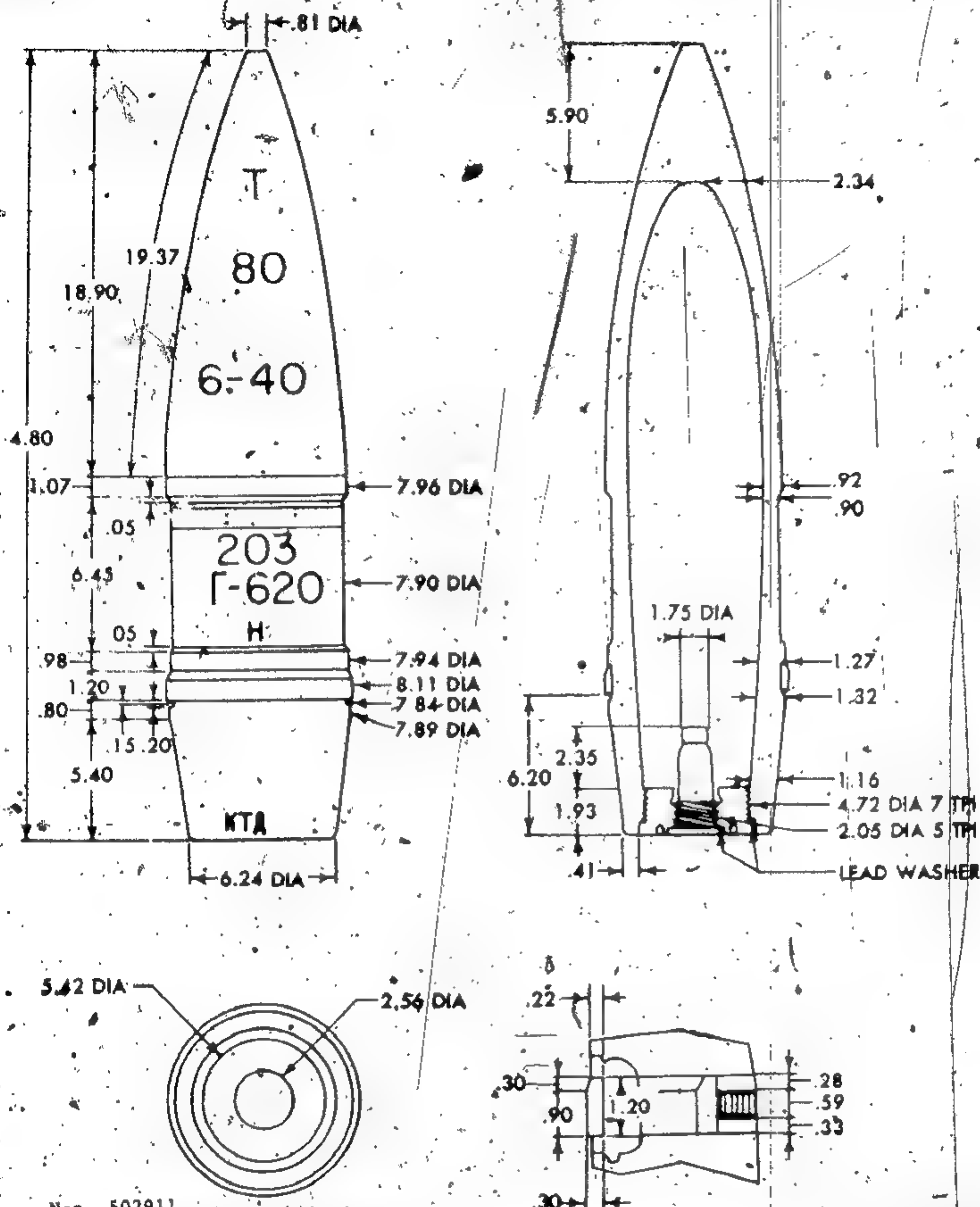
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Neg. 502911  
ALL DIMENSIONS IN INCHES

17 INDENTATIONS PER INCH

Caliber	203 mm	Fuze	Model KTD base detonating
Identification	G-620		
Type	CP	Known using	Howitzer M1931 (B-4)
Weight (fuzed)	220.48 lb	weapon	
Bursting charge	33.86 lb TNT	Remarks	Also uses Model KTD-2 base detonating fuze.

Figure 104. Soviet 203-mm CP projectile Model G-620.

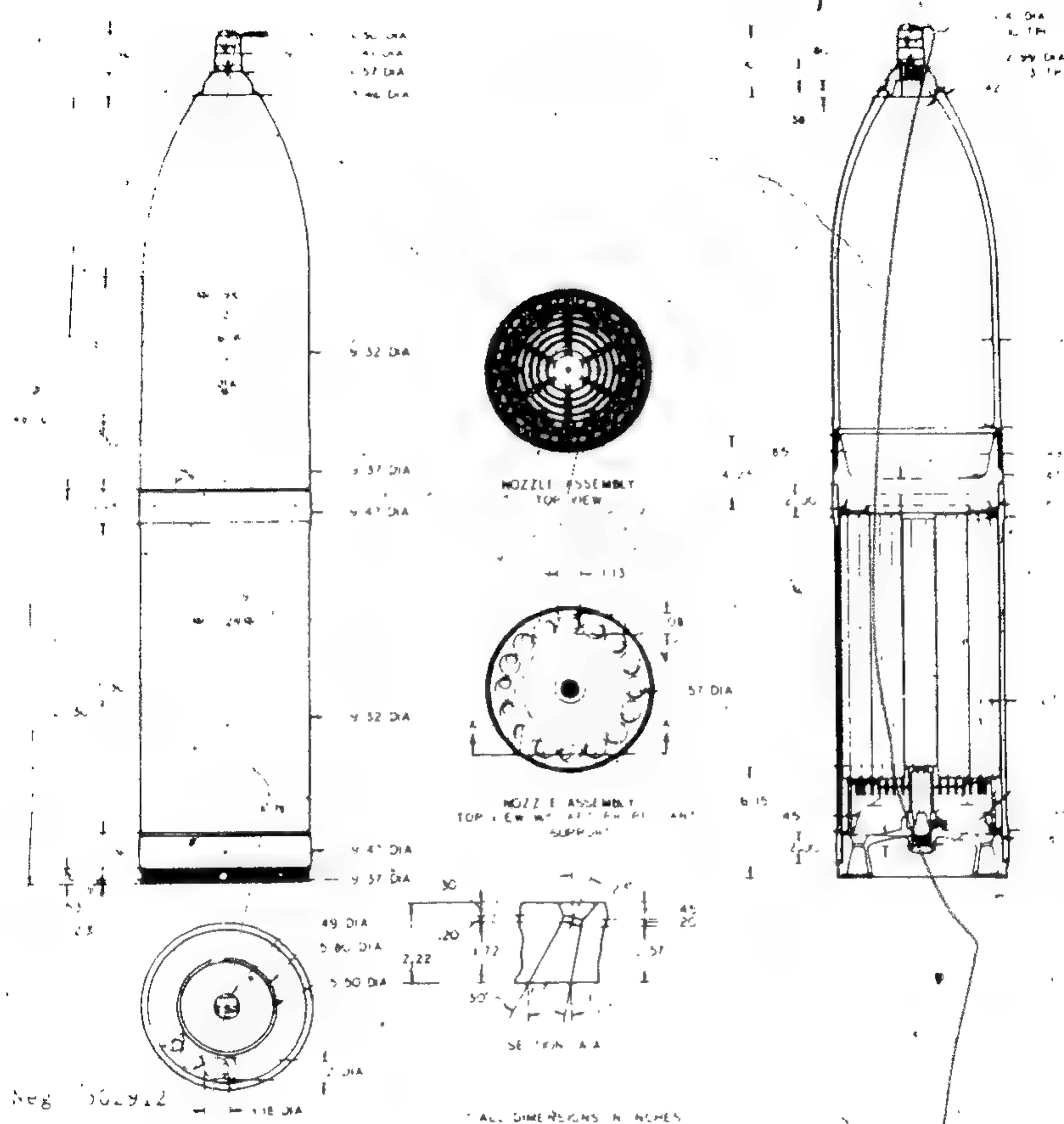
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Caliber	240 mm	Known using	
Identification	?	weapons	12-tube launcher on AT-S artillery tractor and BM-14 launcher on ZIL-151 truck
Type	HE		
Weight (fuzed)	247.86 lb		
Bursting charge	59.81 lb TNT		
Fuze	Model V-24 point detonating	Remarks	Warhead model designation F-961. Two versions of this rocket exist.

Figure 104a. Soviet 240-mm HE projectile Model 2.

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Original

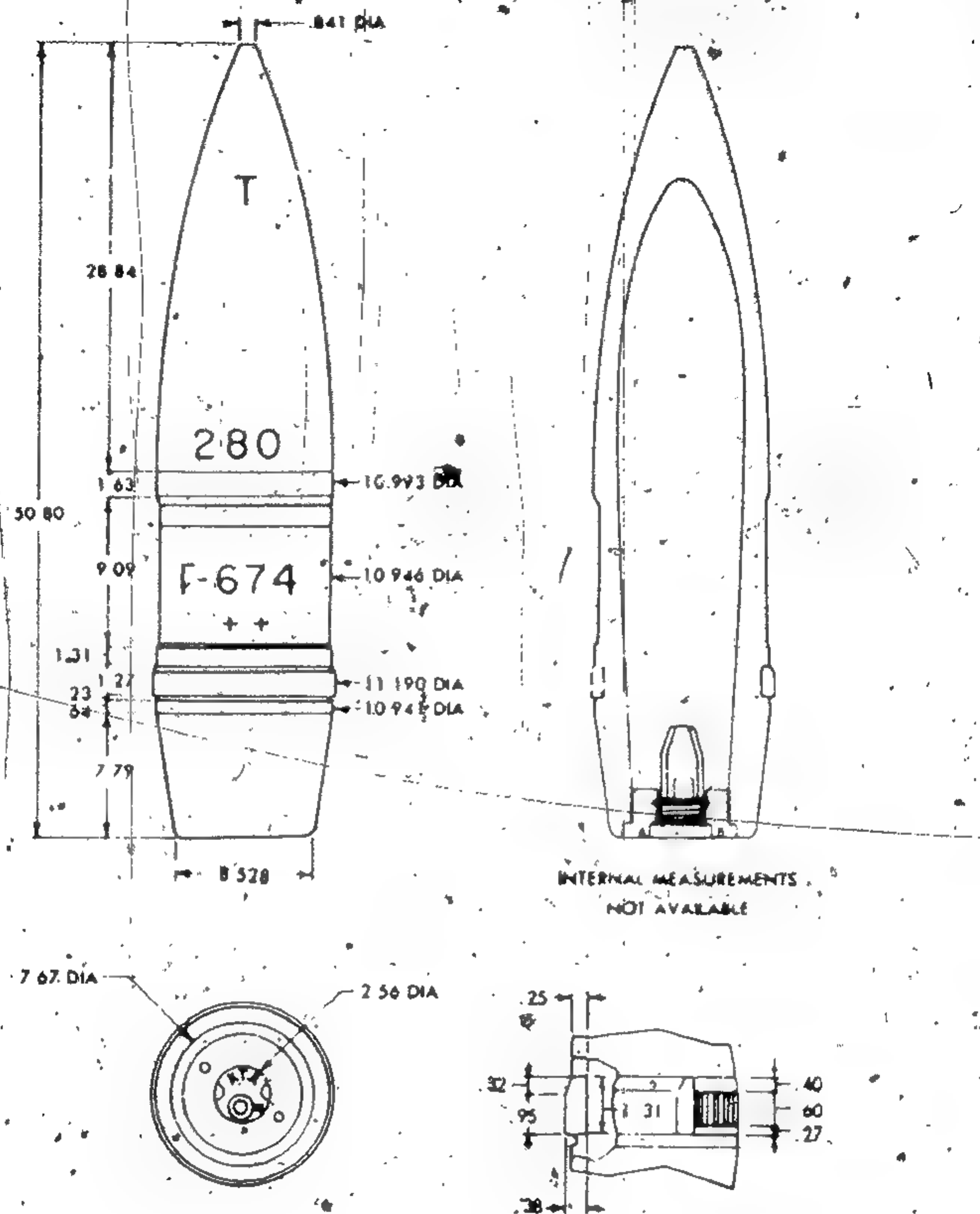


Fig. 502911  
1:10.00  
ALL DIMENSIONS IN INCHES

Caliber	280 mm	(Continued)	(howitzers) M1914/15
Identification	G-674		Schneider and M1939
Type	CP		(BR-5)
Weight (fuzed)	632.00 lb	Remarks	Model KTD fuze is bore
Bursting charge	(?) lb TNT		safe, can be set for
Fuze	Model KTD		short or long delay,
	base		has no instantaneous
	detonating		action, and must be
Known using			set on "PK" for
weapons	Mortars		transportation.

Figure 105. Soviet 280-mm CP projectile Model G-674.

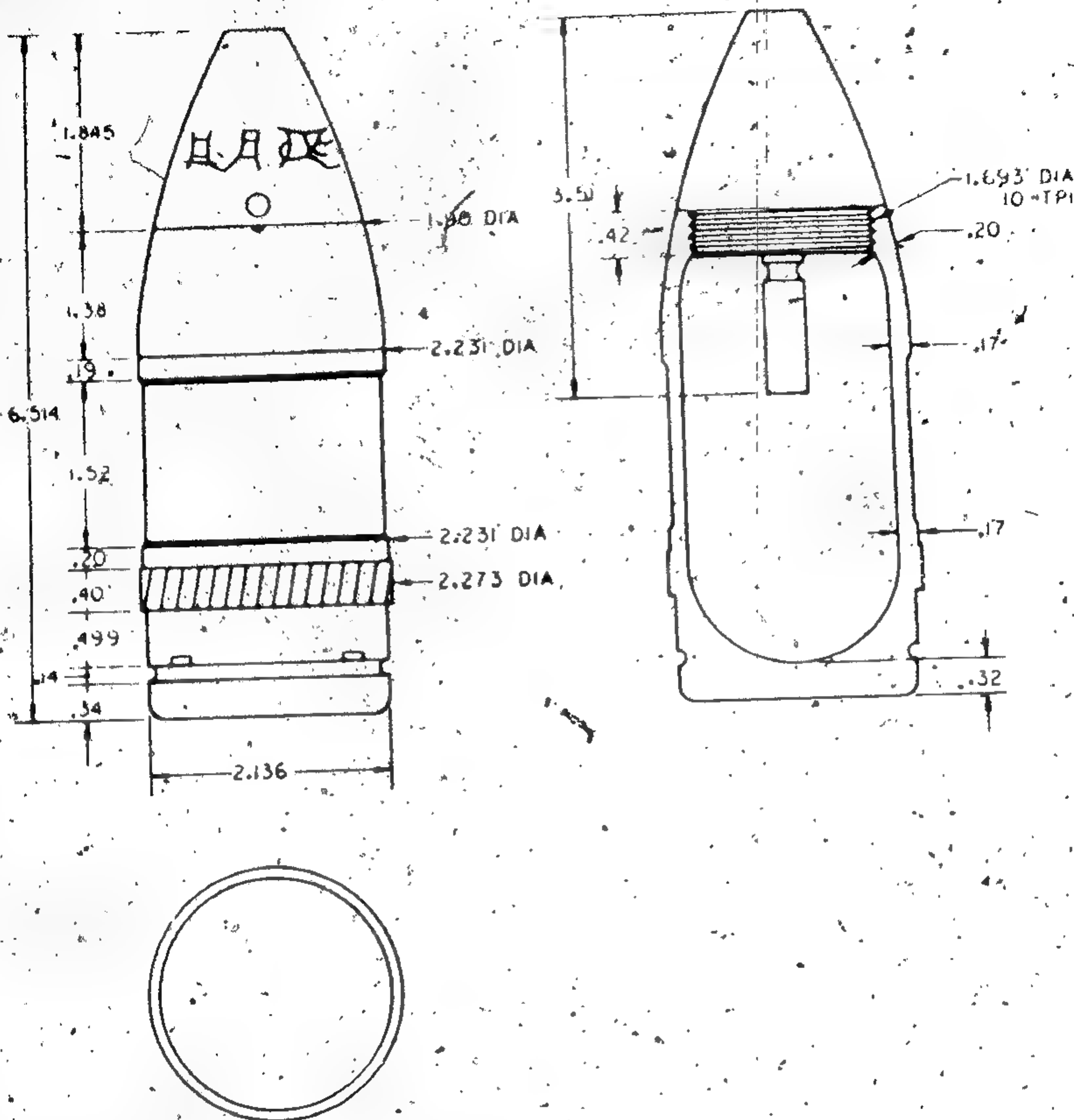
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Neg. 502914

ALL DIMENSIONS IN INCHES

Caliber ----- 57 mm  
 Identification ----- (?)  
 Type ----- HE  
 Weight (fuzed) ----- 2.84 lb  
 Bursting charge ----- 0.50 lb  
 TNT

Fuze ----- Type (?) point detonating  
 Known using -----  
 weapon ----- Recoilless rifle Type 36,  
 steel rotating band is  
 integral part of pro-  
 jectile body

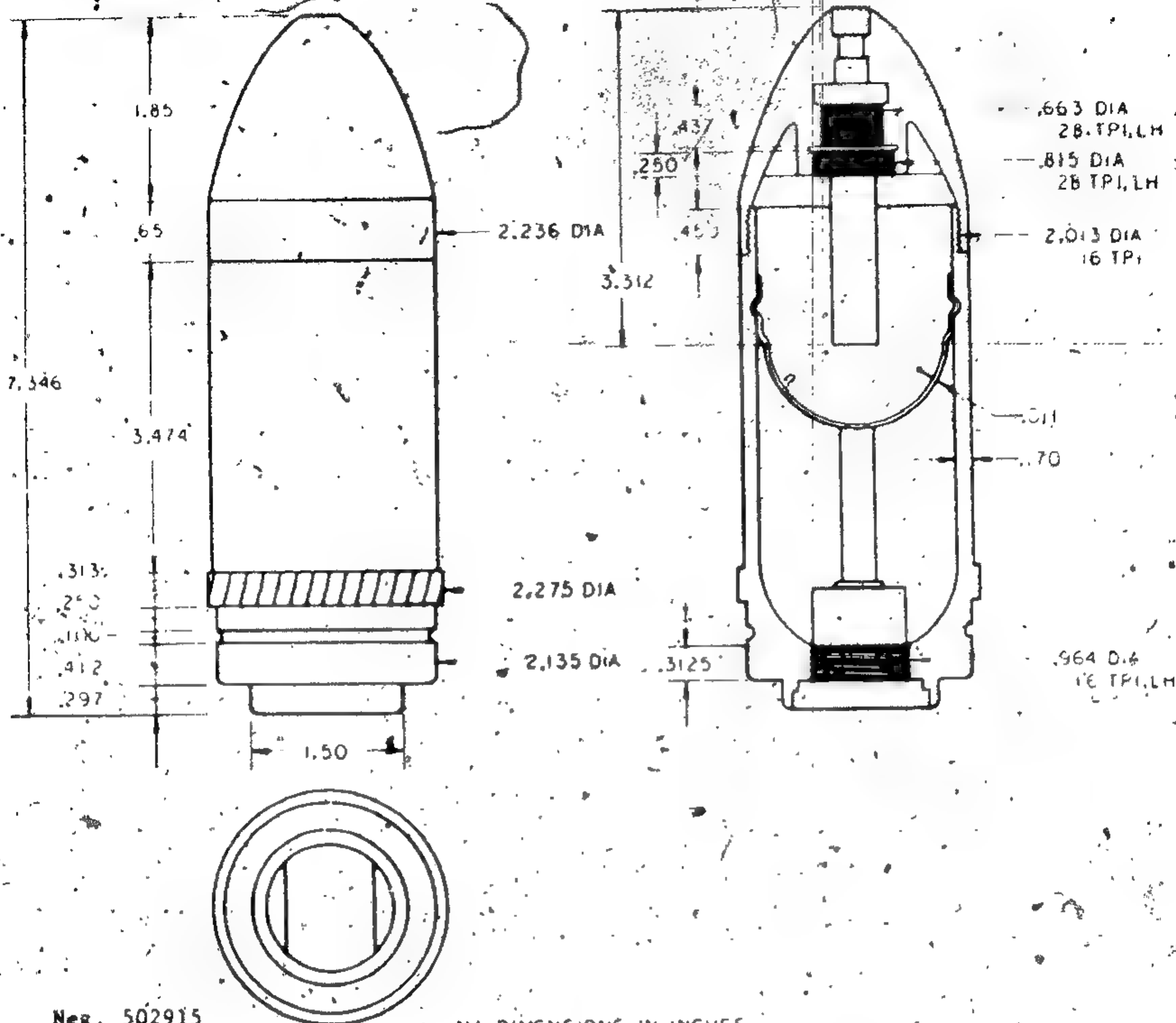
Figure 106. PRC 57-mm HE projectile Type (?). (Copy of US M306)

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Neg. 502915

ALL DIMENSIONS IN INCHES

Caliber	57 mm	Fuze	Type (?) PIBD
Identification	(?)	Known using	
Type	HEAT	weapon	Recoilless rifle Type 36
Weight (fuzed)	2.71 lb	Remarks	Steel rotating band is,
Bursting charge	0.35 lb TNT		integral part of projectile body.

Figure 107. PRC 57-mm HEAT projectile Type (?).  
(Copy of US M307)

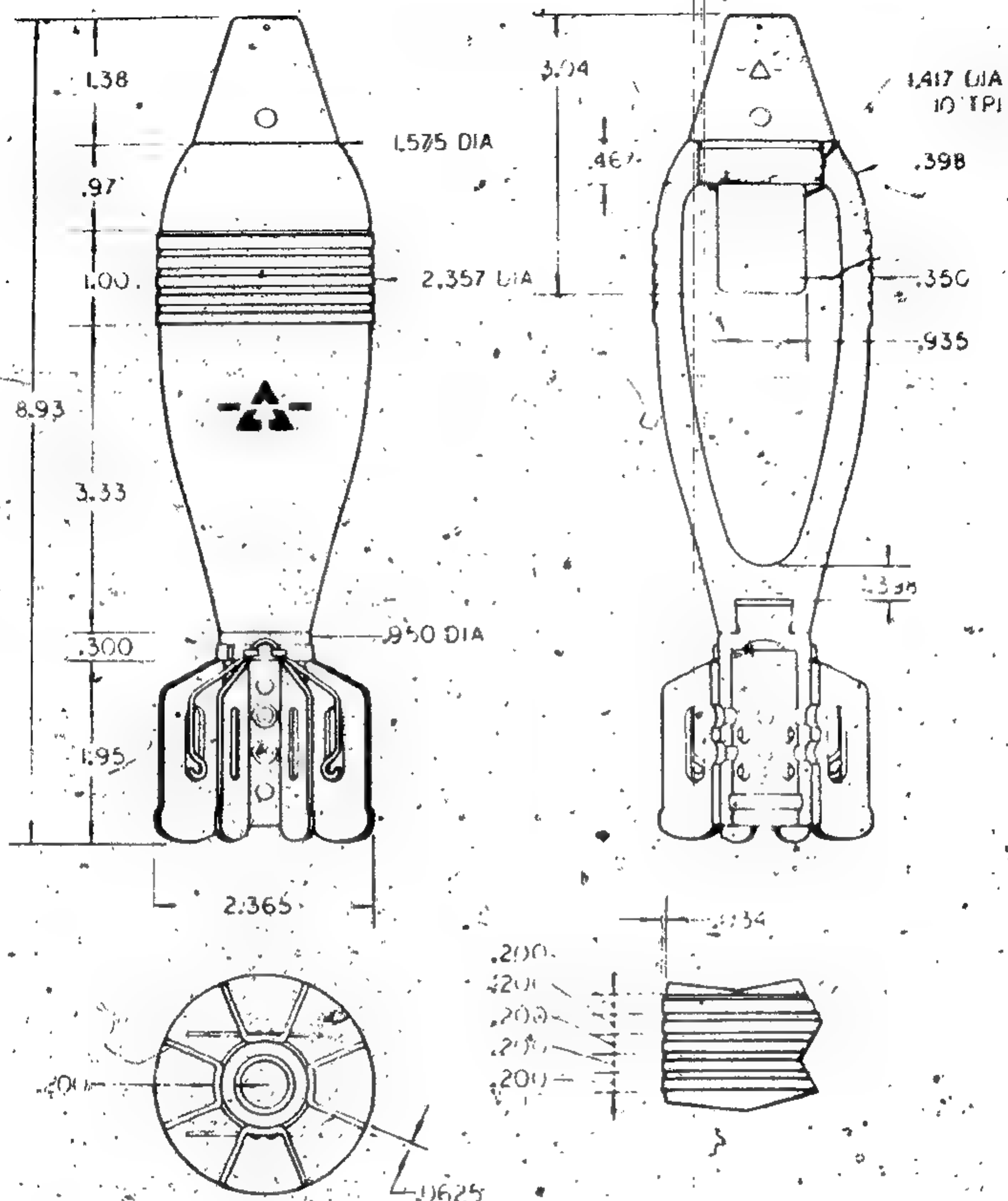
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Neg. 502916

ALL DIMENSIONS IN INCHES

Caliber -----	60 mm	Fuze -----	Point detonating
Identification -----	31		Types 3, 5, 7, and
Type -----	Frag		100-3
Weight (fuzed) -----	3.25 lb	Known using	
Bursting charge -----	0.26 lb	weapon -----	Mortar Type 31
	TNT		(M1942)

Figure 108. PRC 60-mm Frag projectile Type 31.  
(Copy US M49A2)

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Original



ALL DIMENSIONS IN INCHES

Caliber -----	60 mm	Fuze -----	Point detonating Types
Identification -----	31		3, 5, 7, and 100-3
Type -----	Frag	Known using	
Weight, (fuzed) -----	3.25 lb	weapon -----	Mortar Type 31
Bursting charge -----	0.24 lb TNT		(M1942)

Figure 109. PRC 60-mm Frag projectile Type 31.  
(Copy of US M49A2) (variant)

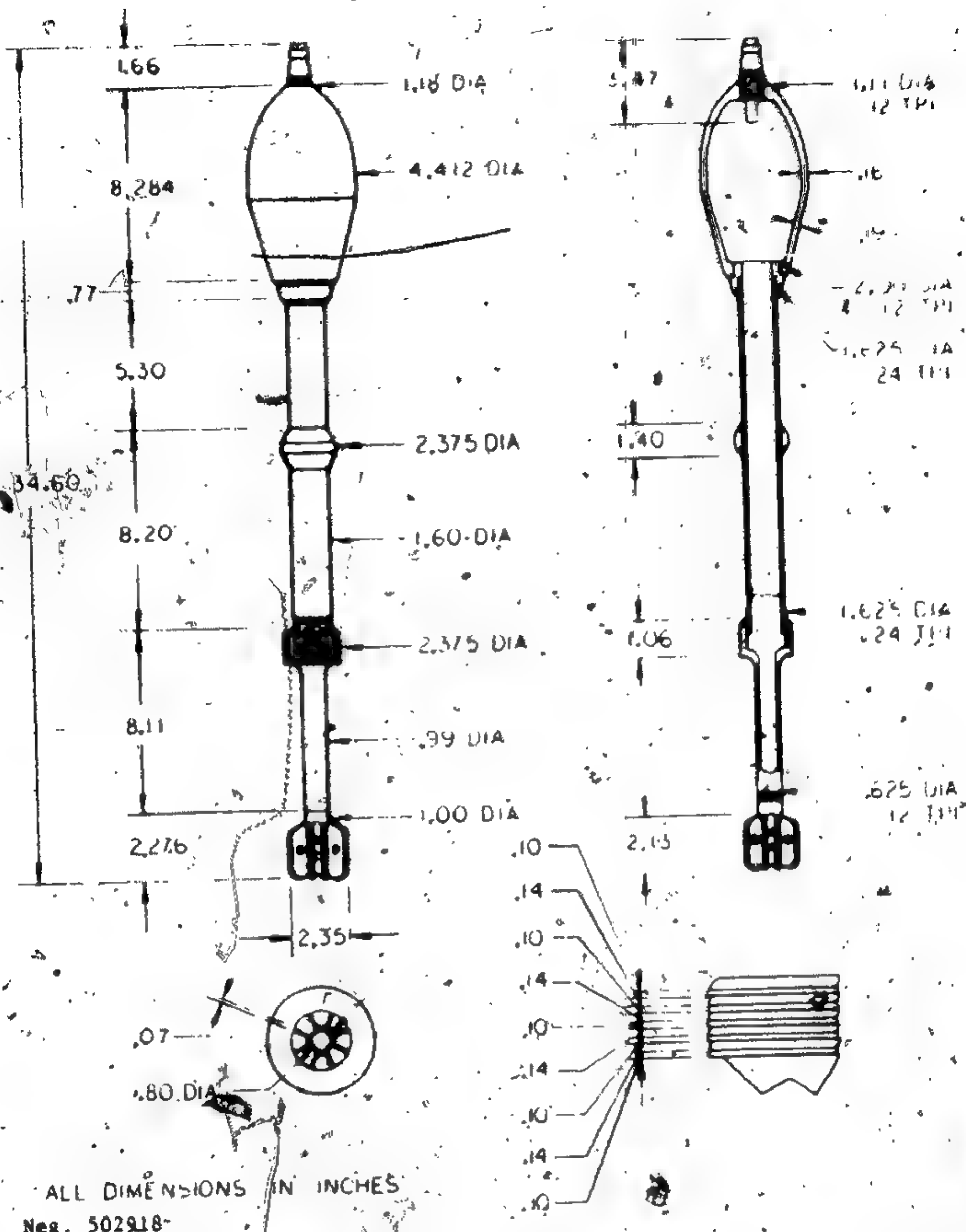
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Caliber ----- 60 mm  
 Identification ----- (?) high capacity  
 Type ----- HE  
 Weight (fuzed) ----- 13.56 lb

Bursting charge ----- 4.55 lb TNT  
 Fuze ----- Type 3711 point detonating  
 Known using -----  
 Weapon ----- Mortar Type 31 (M1942)

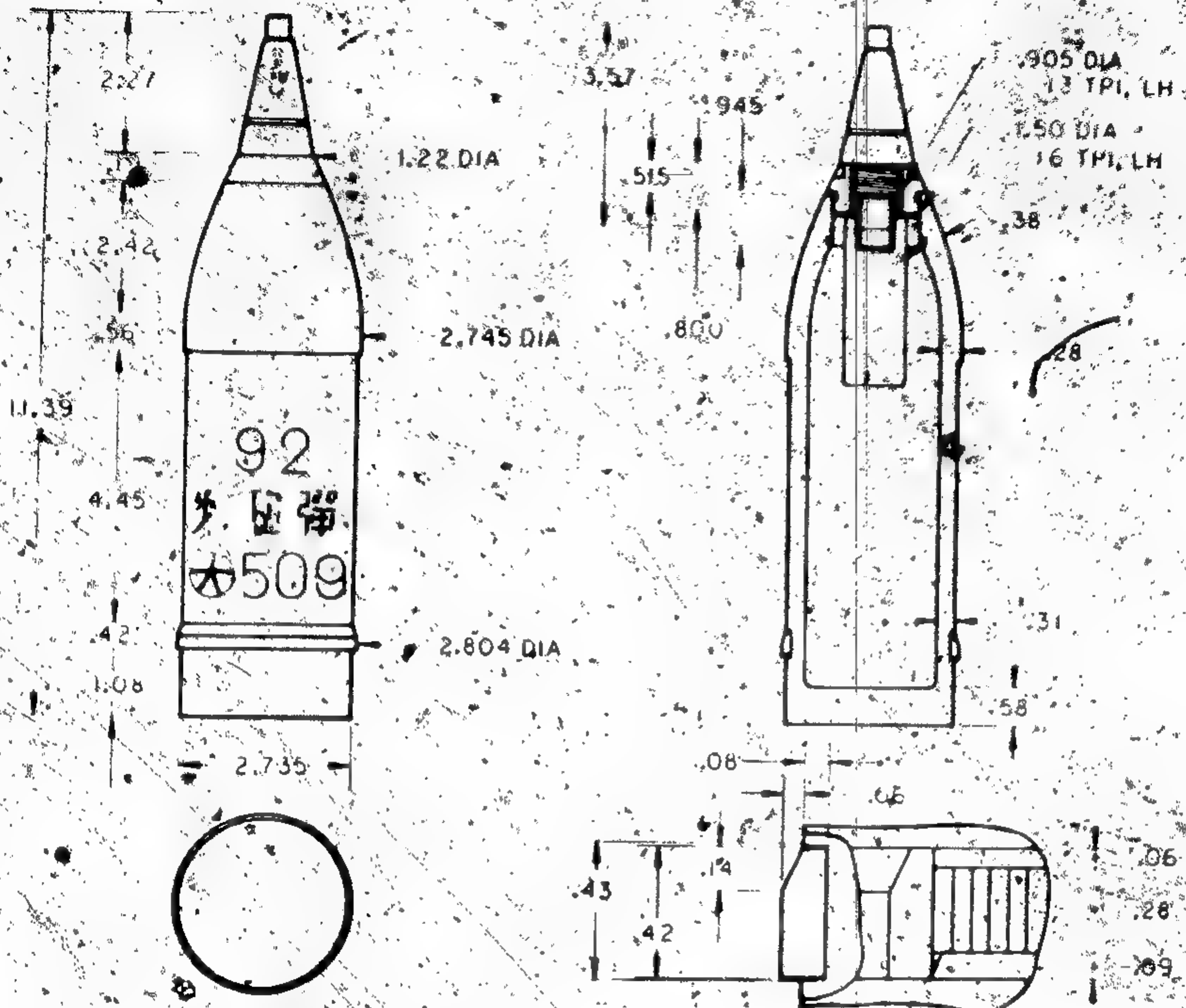
Figure 110. PRC 60-mm HE projectile Type (?) (high capacity).

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Original



Neg. 502919

ALL DIMENSIONS IN INCHES

Caliber	80 mm
Identification	92
Type	HE
Weight (fuzed)	8.10 lb
Bursting charge	1.36 lb TNT/ ammonium nitrate
Fuze	Type 88 point detonating

Known using  
weapon  
Remarks

Howitzer Type 92  
Also uses Type 88  
point, detonating  
fuze (delay) with  
ogival nose. Pro-  
jectile and fuze  
are copies of  
Japanese WWII  
design.

Figure 111. PRC 70-mm HE projectile Type 92.  
(Copy of Japanese Model 92)

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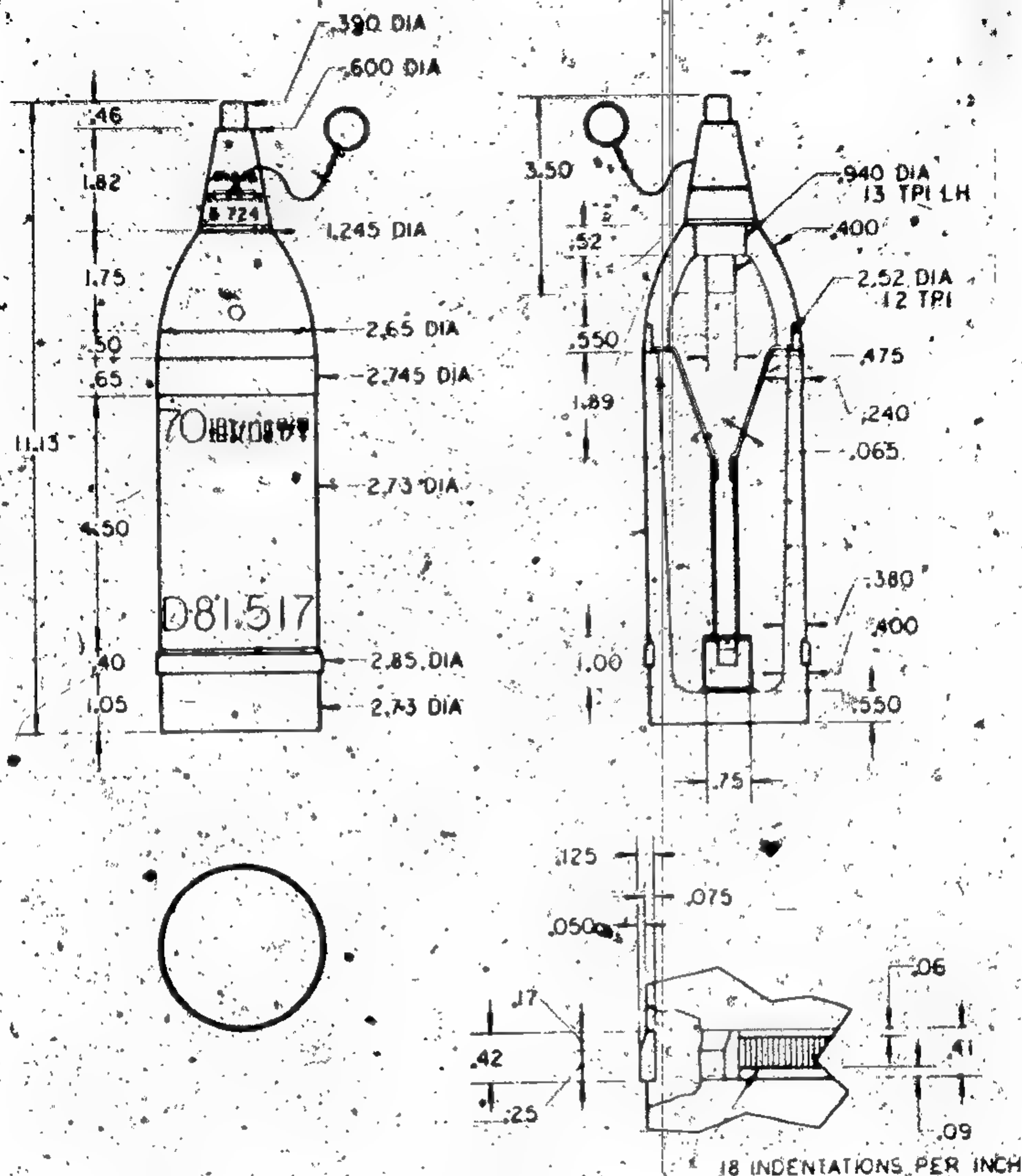


Fig. 502920

ALL DIMENSIONS IN INCHES

Caliber	70 mm	Fuze	Type 88 point detonating
Identification	3	Known using	
Type	HEAT	weapon	Howitzer Type 92
Weight (fuzed)	6.33 lb	Remarks	Projectile and fuze are
Burating charge	0.91 lb		copies of Japanese
	RDX/		WWII design.
	TNT		

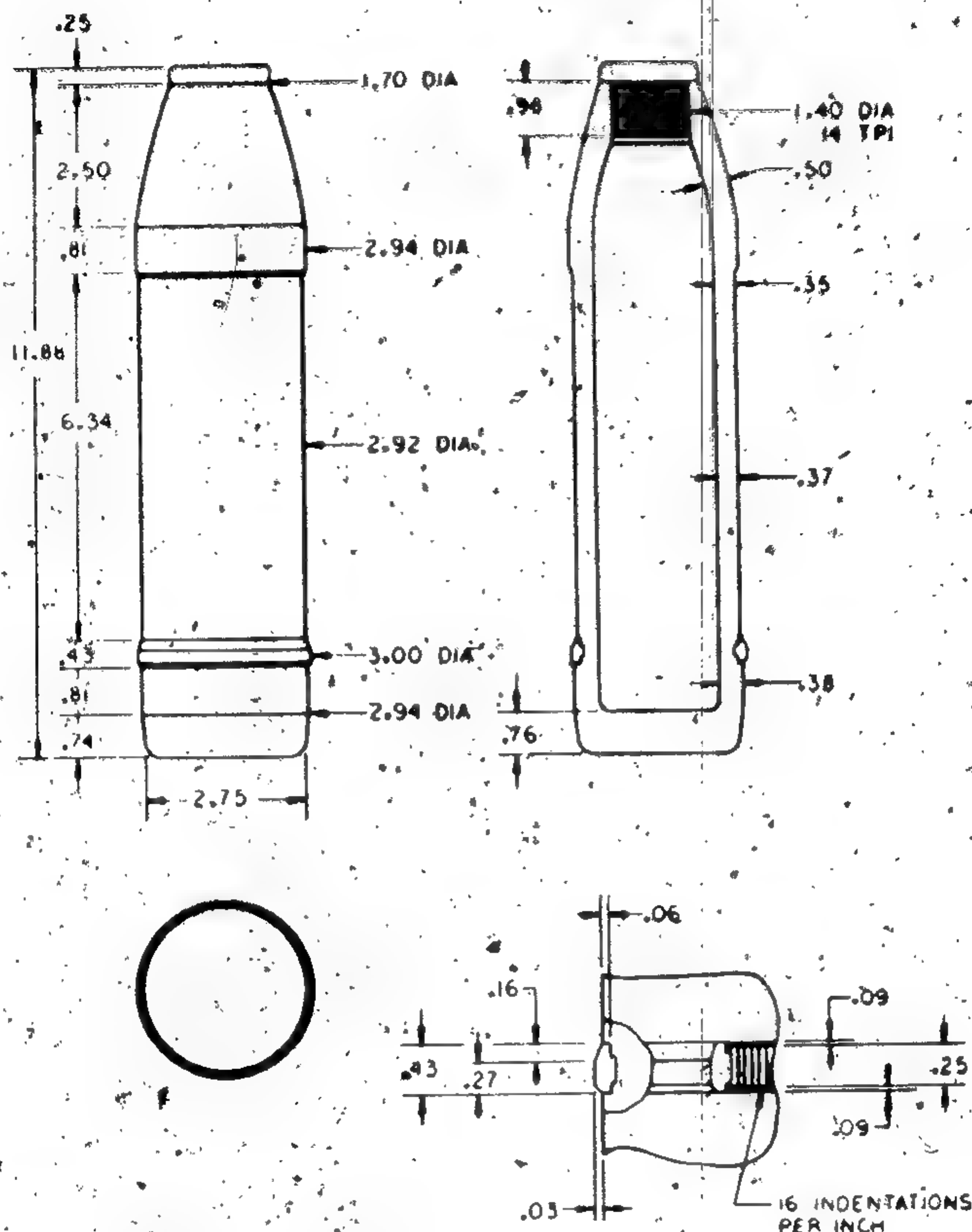
Figure 112. PRC 70-mm HEAT projectile Type 3.  
(Copy of Japanese Model 3)

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Original



Neg. 502921

ALL DIMENSIONS IN INCHES

Caliber	75 mm.	Known using	
Identification	94	weapons	Mountain guns Types 41 and 94 and field gun Type 38
Type	HE		
Weight (fuzed)	13.24 lb		
Bursting Charge	1.76 lb.	Remarks	All the using weapons are of Japanese WWII design. The projectile is illustrated without fuze adapter and fuze. The projectile may also be filled with TNT.
	RDX/ ammonium nitrate		
Fuze	Type 88 point detonating		

Figure 113. PRC 75-mm HE projectile Type 94.  
(Copy of Japanese Model 94)

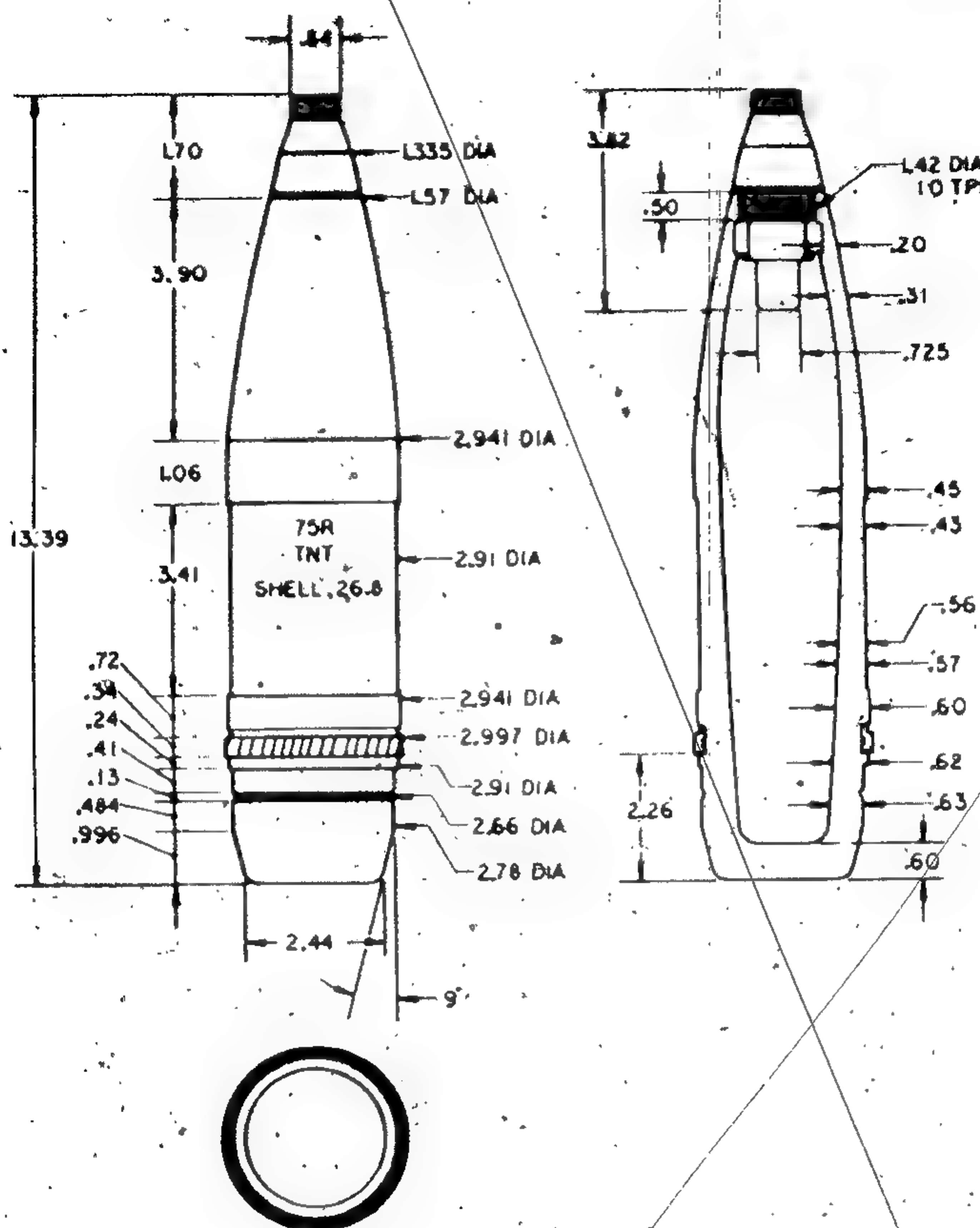
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Neg. 502922

ALL DIMENSIONS IN INCHES

Caliber ----- 75 mm  
 Identification ----- 26.8  
 Type ----- HE  
 Weight (fuzed) ----- 13.57 lb

Bursting charge ----- 1.56 lb TNT  
 Fuze ----- Types 1, 3, and 53 point detonating  
 Known using weapons ----- Recoilless rifles Types 52 and 56

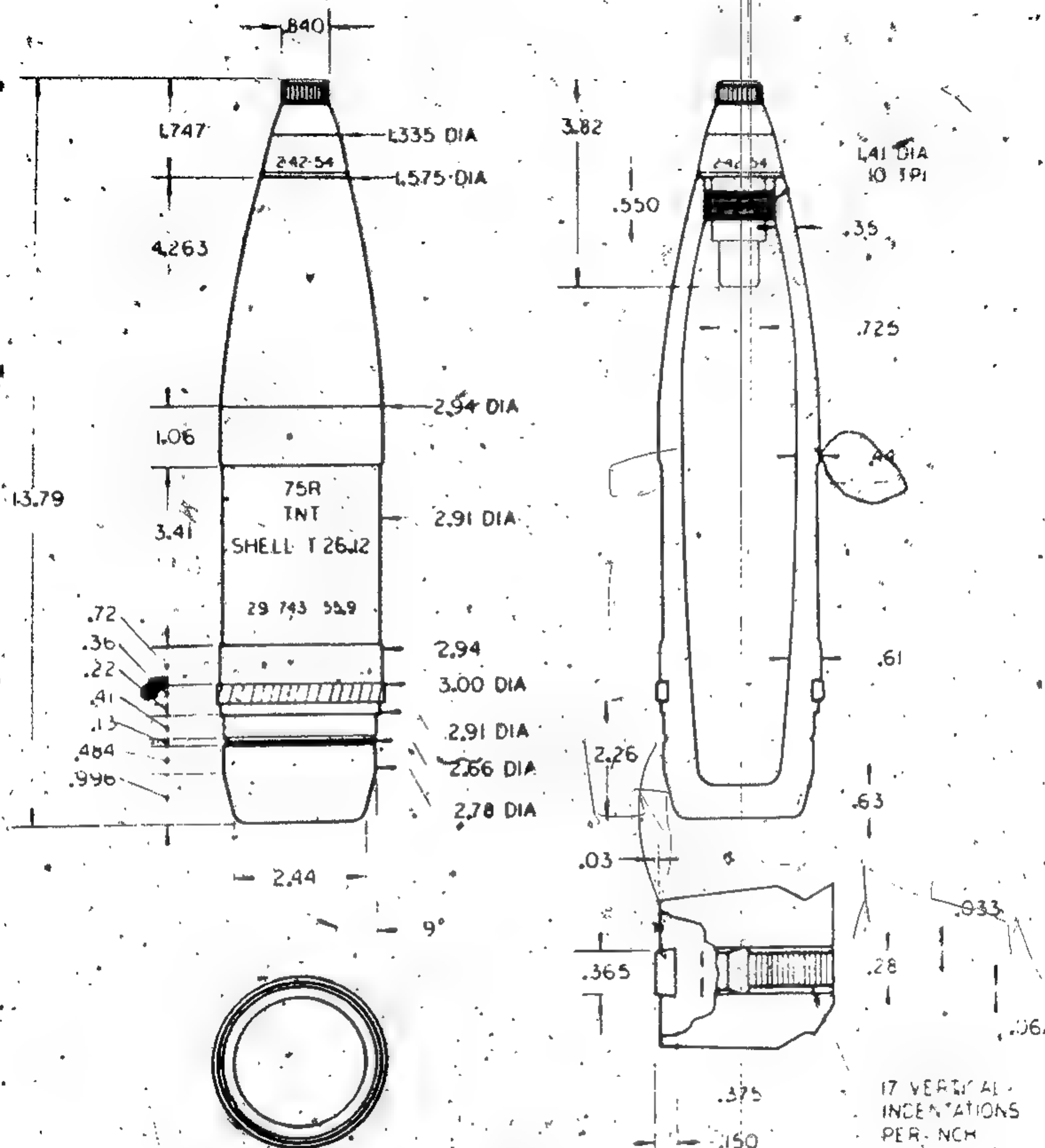
Figure 114. PRC 75-mm HE projectile Type 26.8.  
 (Copy of US M309).

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Original



Neg. 502923

ALL DIMENSIONS IN INCHES

Caliber	75 mm	Fuze	Point detonating
Identification	26.12		Types 1, 3, and
Type	HE		53
Weight (fuzed)	13.57 lb	Known using	
Bursting charge	1.56 lb TNT	weapons	Recoilless rifles
			Types 52 and 56

Figure 115. PRC 75-mm HE projectile Type 26.12.  
(Copy of US M309) (variant I)

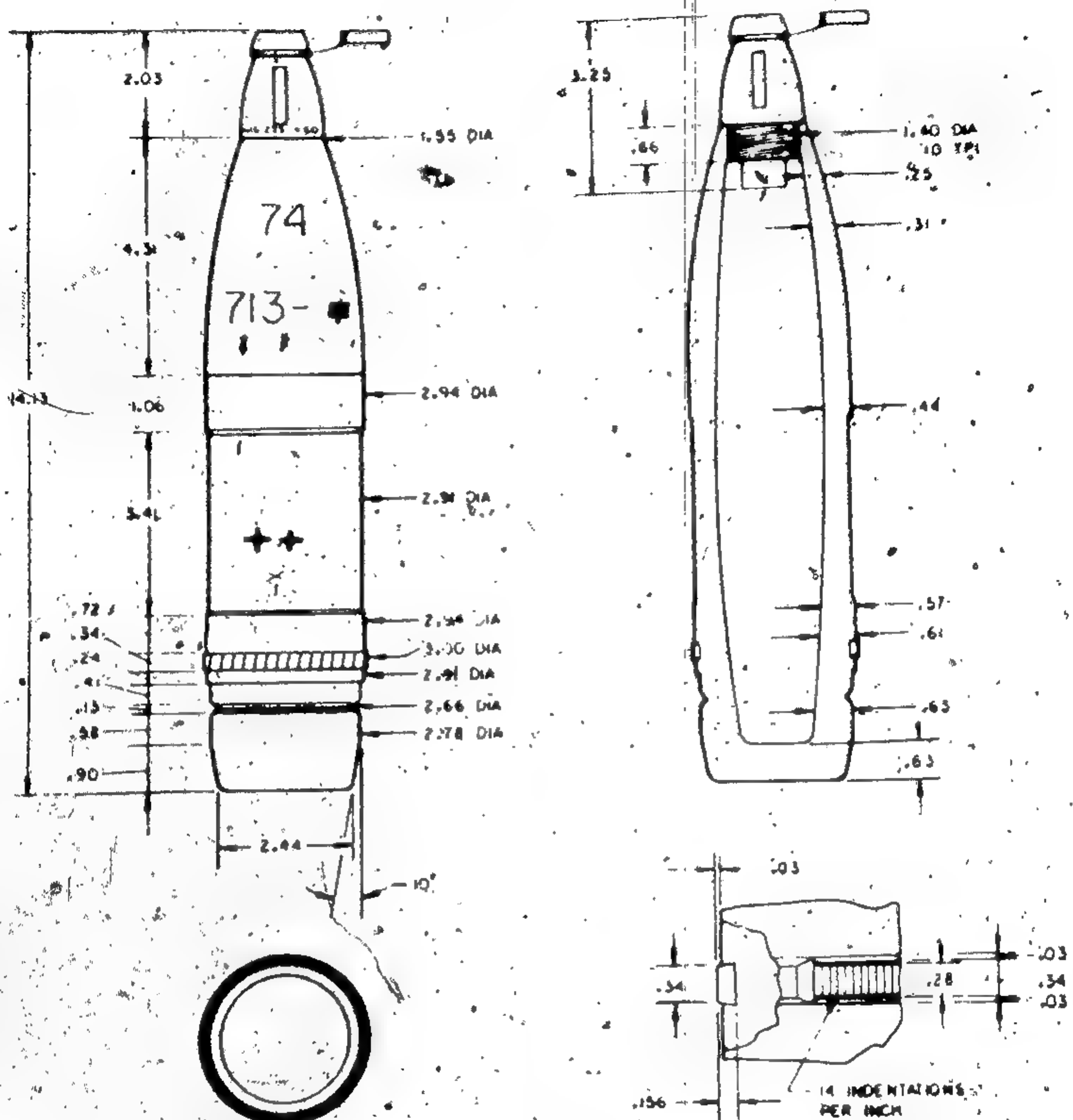
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ALL DIMENSIONS IN INCHES

Caliber	75 mm
Identification	(?)
Type	HE
Weight (fuzed)	13.09 lb
Bursting charge	1.57 lb TNT
Fuze	Types 1, 3, 53, and M-6 point detonating

Known using weapons

Remarks

Recoilless rifles Types 52 and 56

The Soviet Model M-6 mortar fuze is assembled to the projectile.

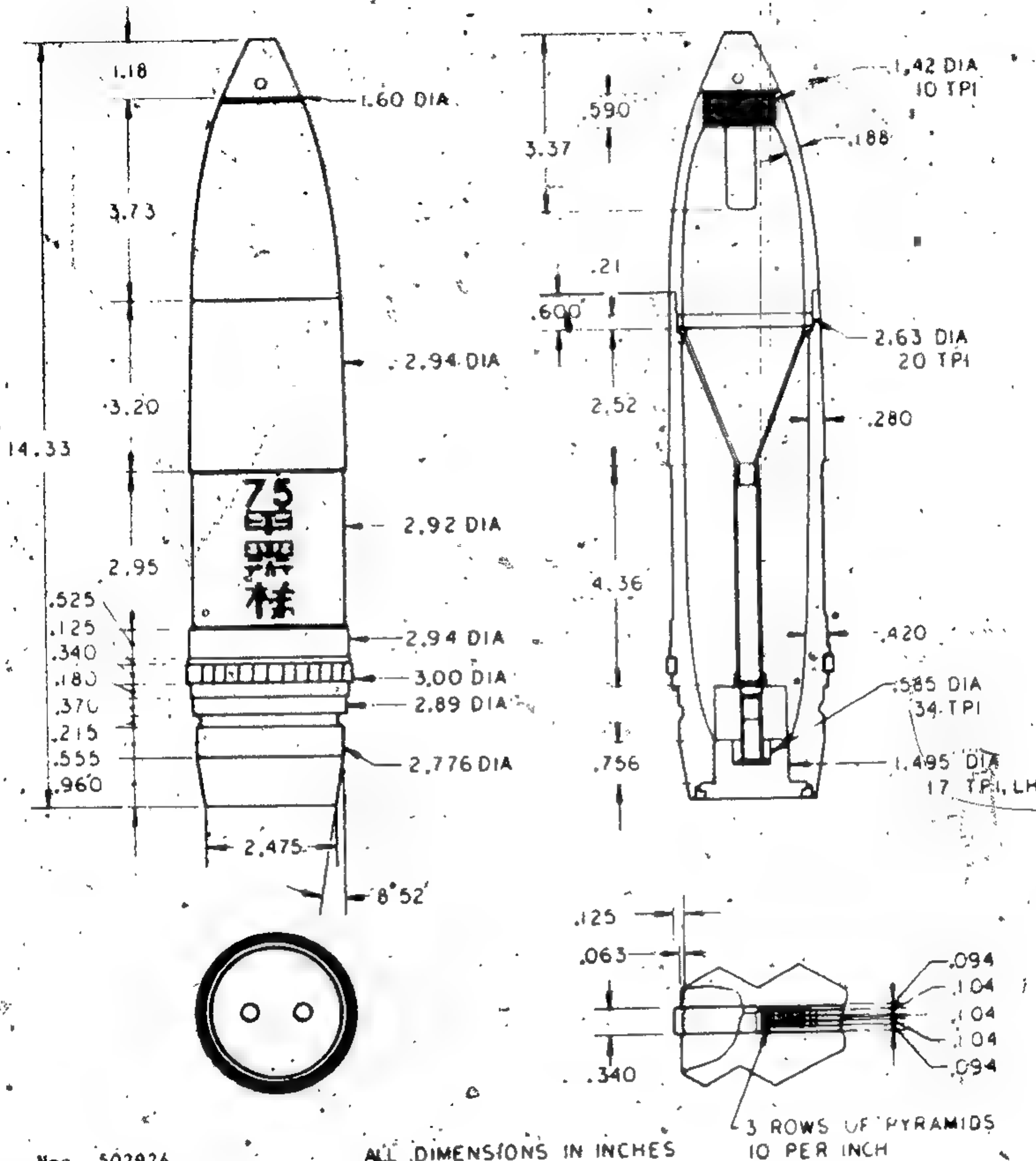
Figure 116. • PRC 75 mm HE projectile Type (?).  
(Copy of US M309) (variant II)

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Caliber	75 mm	Bursting charge	1.37 lb RDX/TNT
Identification	(?)	Fuze	Type (?) PIBD
Type	HEAT	Known using weapons	Recoilless rifles Types 52 and 56
Weight (fuzed)	11.88 lb		

Figure 117. PRC 75-mm HEAT projectile Type (?).  
(Copy of US M310A1)

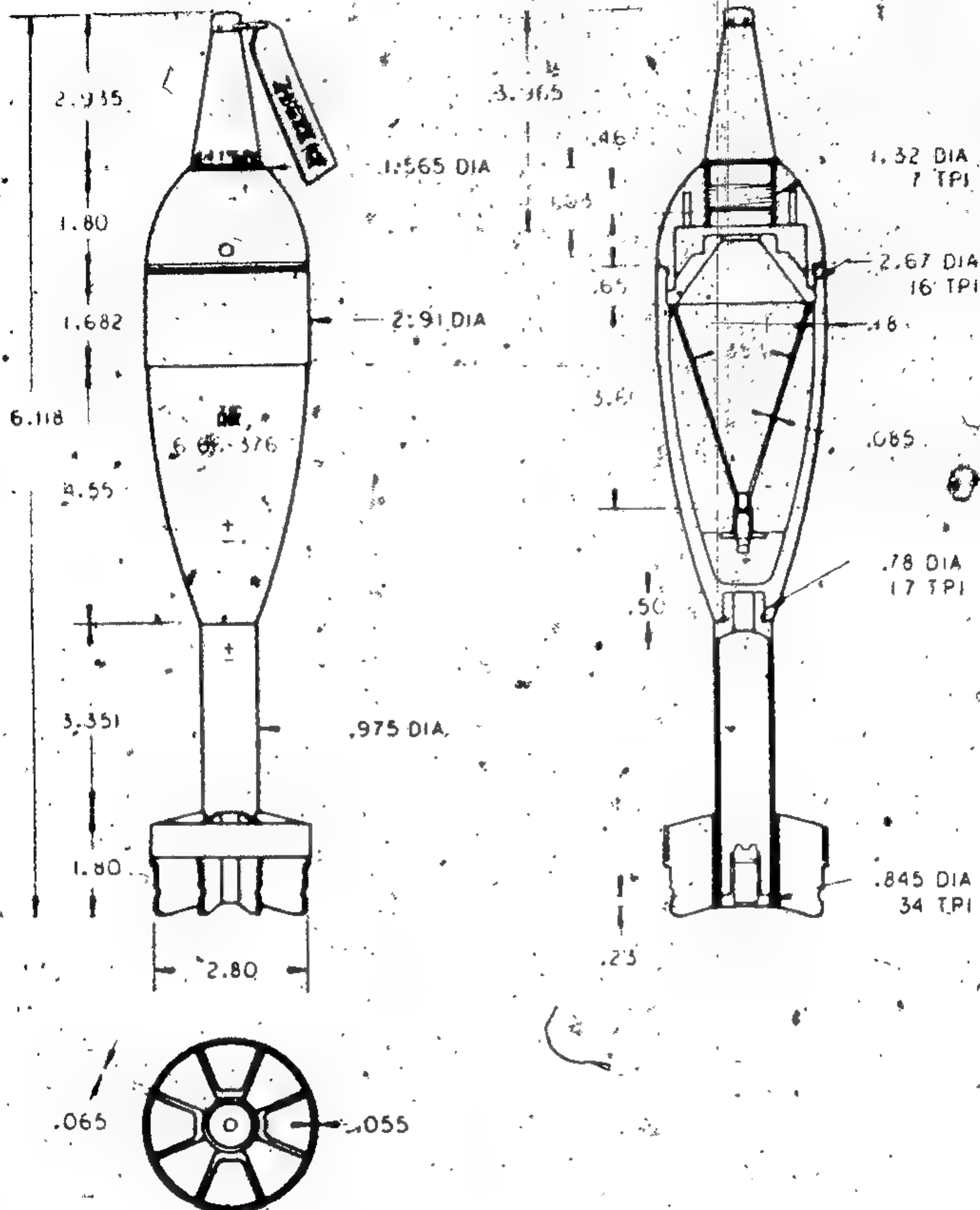
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Neg. 502925

ALL DIMENSIONS IN INCHES

Caliber	75 mm	Fuze	Types 1 and TS-2 PIBD
Identification	(?)	Known using	
Type	HEAT	weapons	Recoilless rifles
Weight (fuzed)	6.18 lb.		Types 52 and 56
Bursting charge	0.75 lb. RDX/TNT	Remarks	The fuzes are copies of the Soviet Model GK-2.

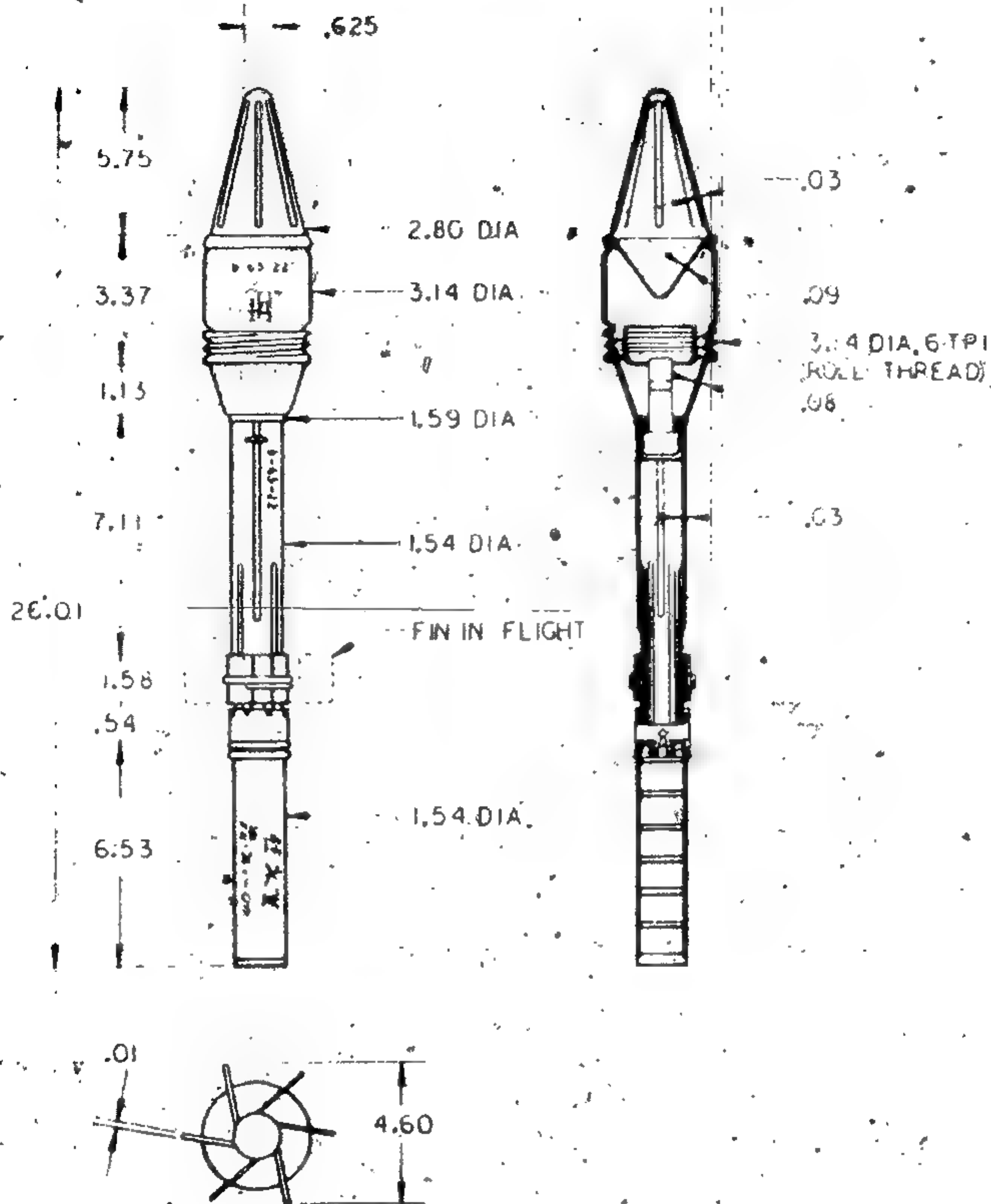
Figure 118. PRC 75-mm HEAT projectile Type (?).

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Original



Neg. 502926

ALL DIMENSIONS IN INCHES

Caliber	40/80 mm	Fuze	Type 2 base detonating
Identification	56	Known using	
Type	HEAT	weapon	Antitank grenade launcher
Weight (fuzed)	3.57 lb		Type 56.
Bursting charge	1.06 lb TNT	Remarks	Although the launcher has a 40-mm bore, the projectile head has an 80-mm diameter.

Figure 119. PRC 40/80-mm HEAT projectile Type 56.  
(Copy of Soviet PG-2)

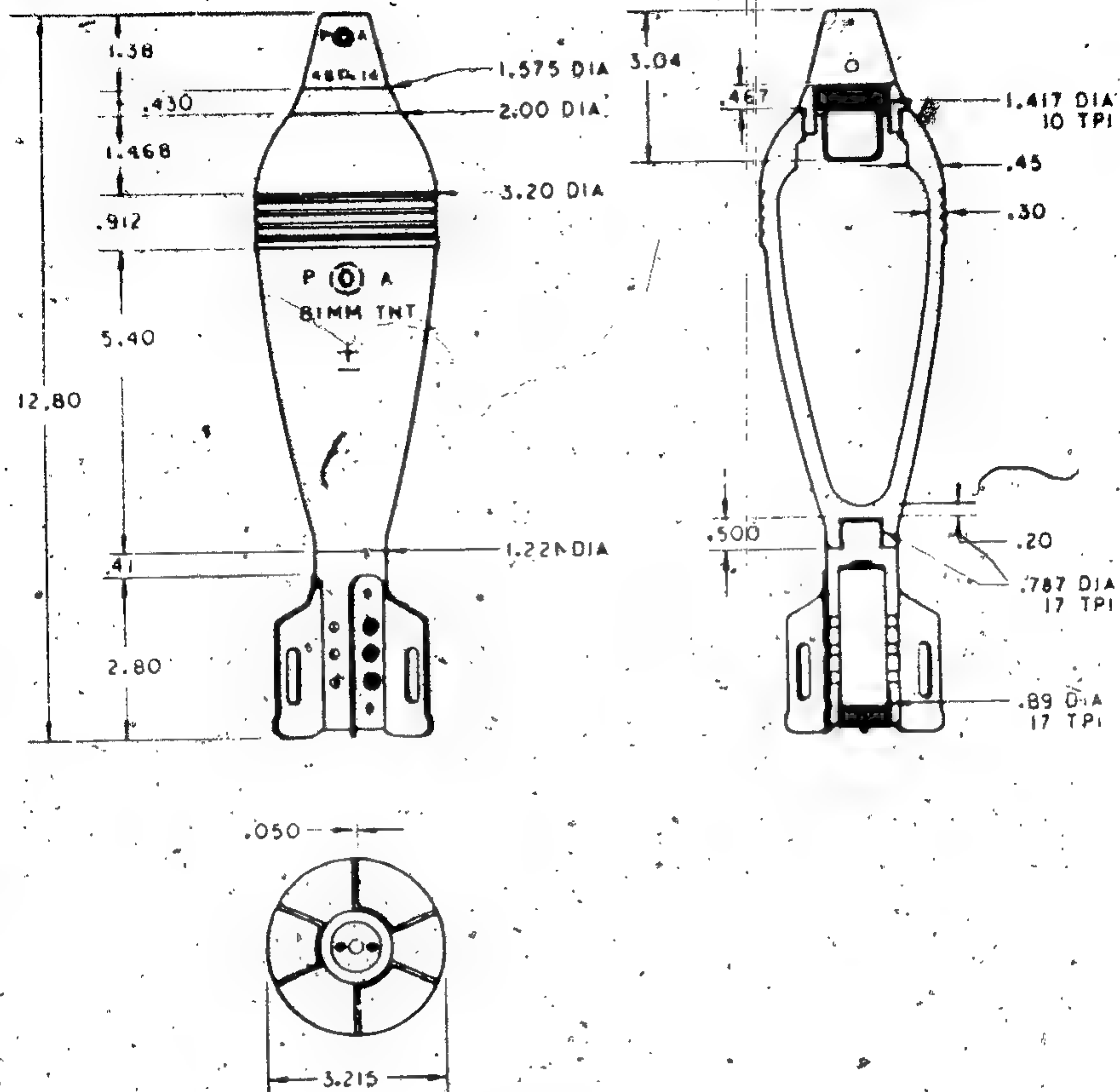
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Neg. 502927

ALL DIMENSIONS IN INCHES

Caliber	81 mm	Bursting charge	1.23 lb TNT
Identification	(?)	Fuze	Type (?)
Type	Frag		point
Weight (fuzed)	7.10 lb		detonating
		Known using weapons	Mortars
			Types 20 and 53

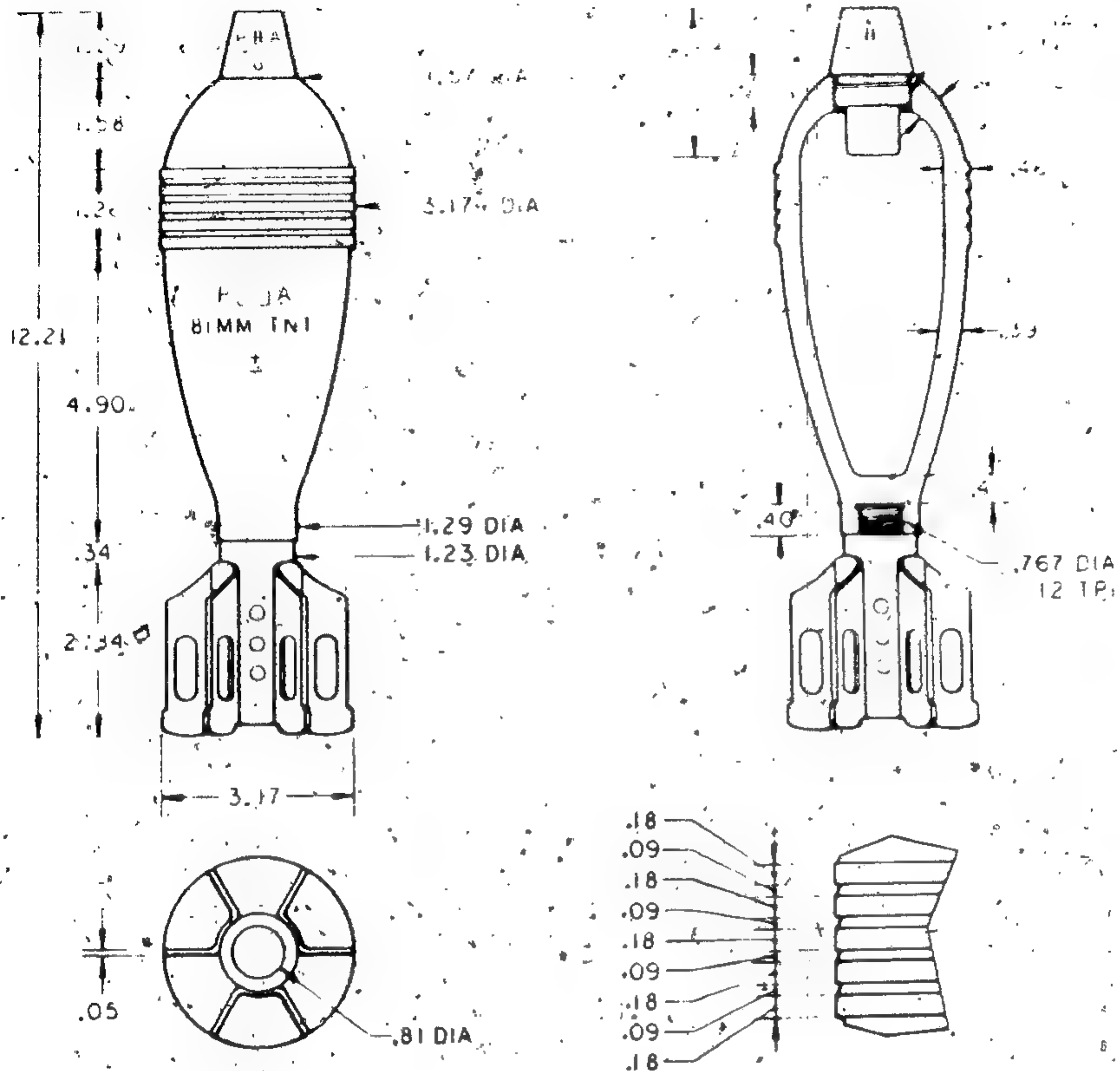
Figure 120. PRC 81-mm frag projectile Type (?).  
(Copy of US M43A1)

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Neg: 502928

ALL DIMENSIONS IN INCHES

Caliber	81 mm	Bursting charge	0.77 lb TNT
Identification	(?)	Fuze	Type (?) point detonating
Type	Frag	Known using	Mortars Types
Weight	7.05 lb	weapons	20 and 53

Figure 121. PRC 81-mm frag projectile Type (?).  
(Copy of US M43A1) (variant)

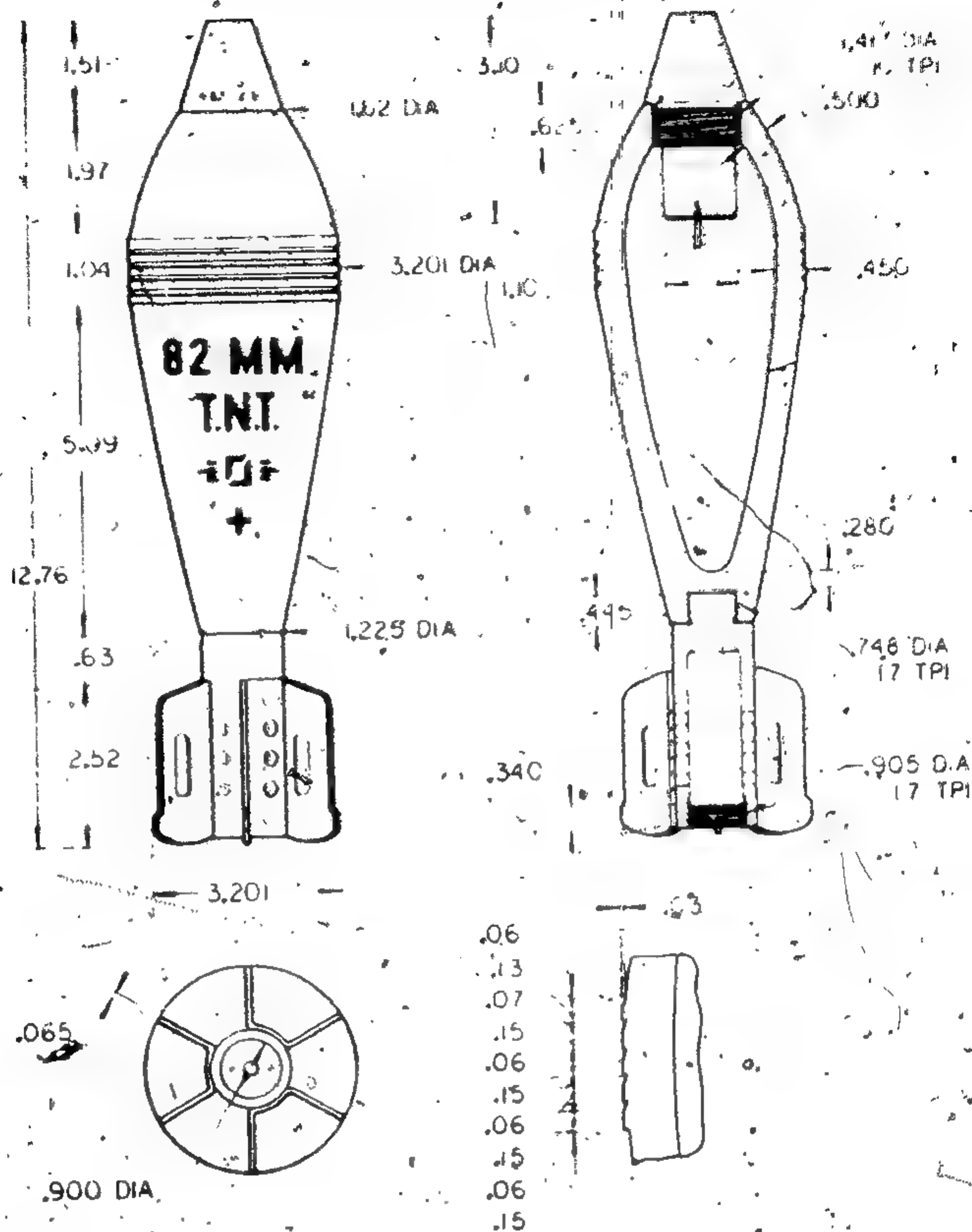
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ALL DIMENSIONS IN INCHES

Caliber	82 mm	Bursting charge	0.84 lb TNT
Identification	53	Fuze	Type (?) point
Type	HE		detonating
Weight (fuzed)	8.52 lb	Known using	Mortars Types
		weapons	20 and 53

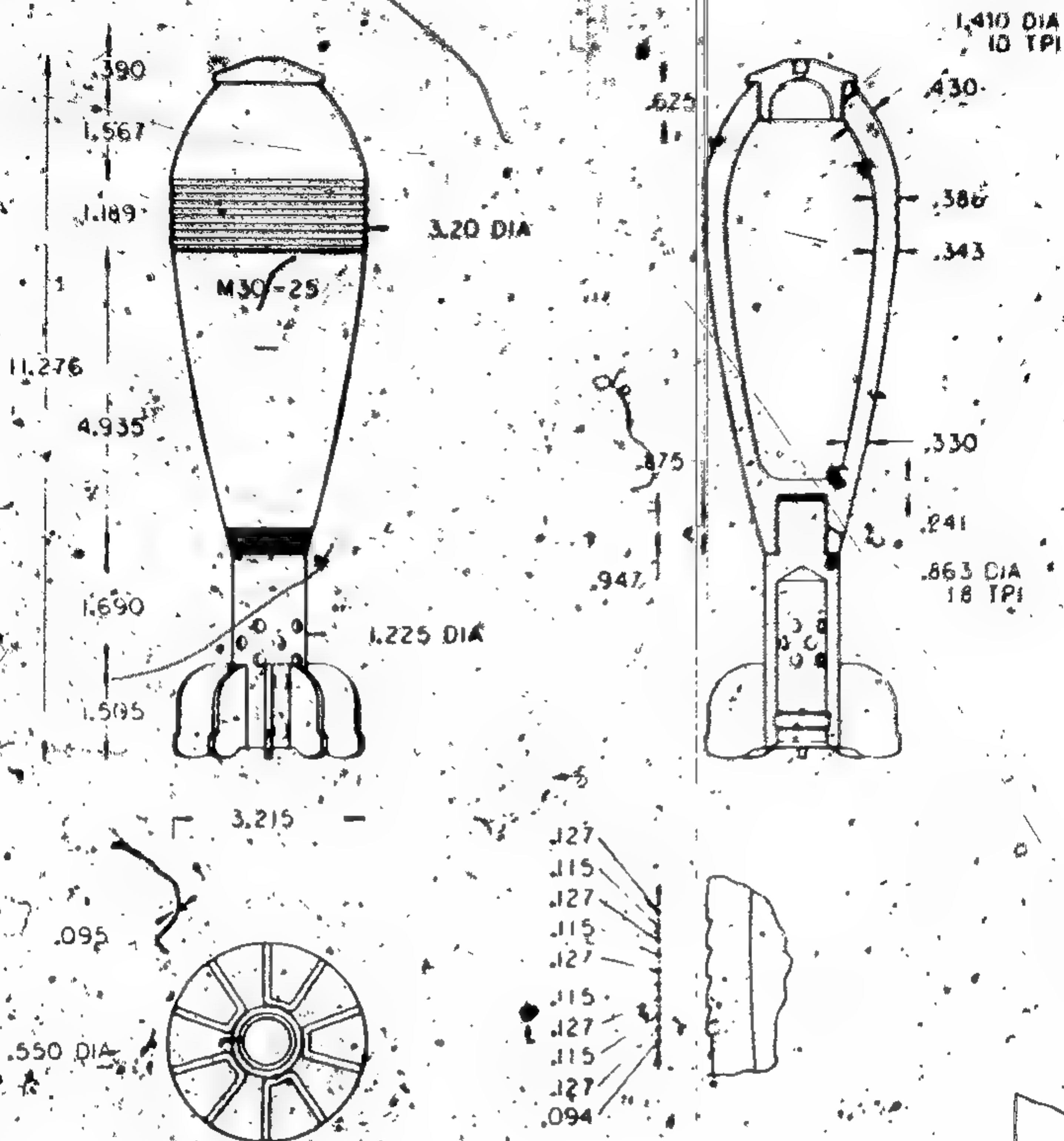
Figure 122. PRC 82-mm HE projectile Type 53.

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Neg. 502930

ALL DIMENSIONS IN INCHES

Caliber	82 mm	Fuze	Type 6, point detonating
Identification	M30	Known using	Mortars Types 20 and 53
Type	Frag	Remarks	Fuze is a copy of the Soviet Model M-6.
Weight (fuzed)	6.93 lb		
Bursting charge	0.92 lb		
	TNT/ dinitro- naphthalene		

Figure 123. PRC 82-mm frag projectile Type M30.  
(Copy of Soviet O-832 series)

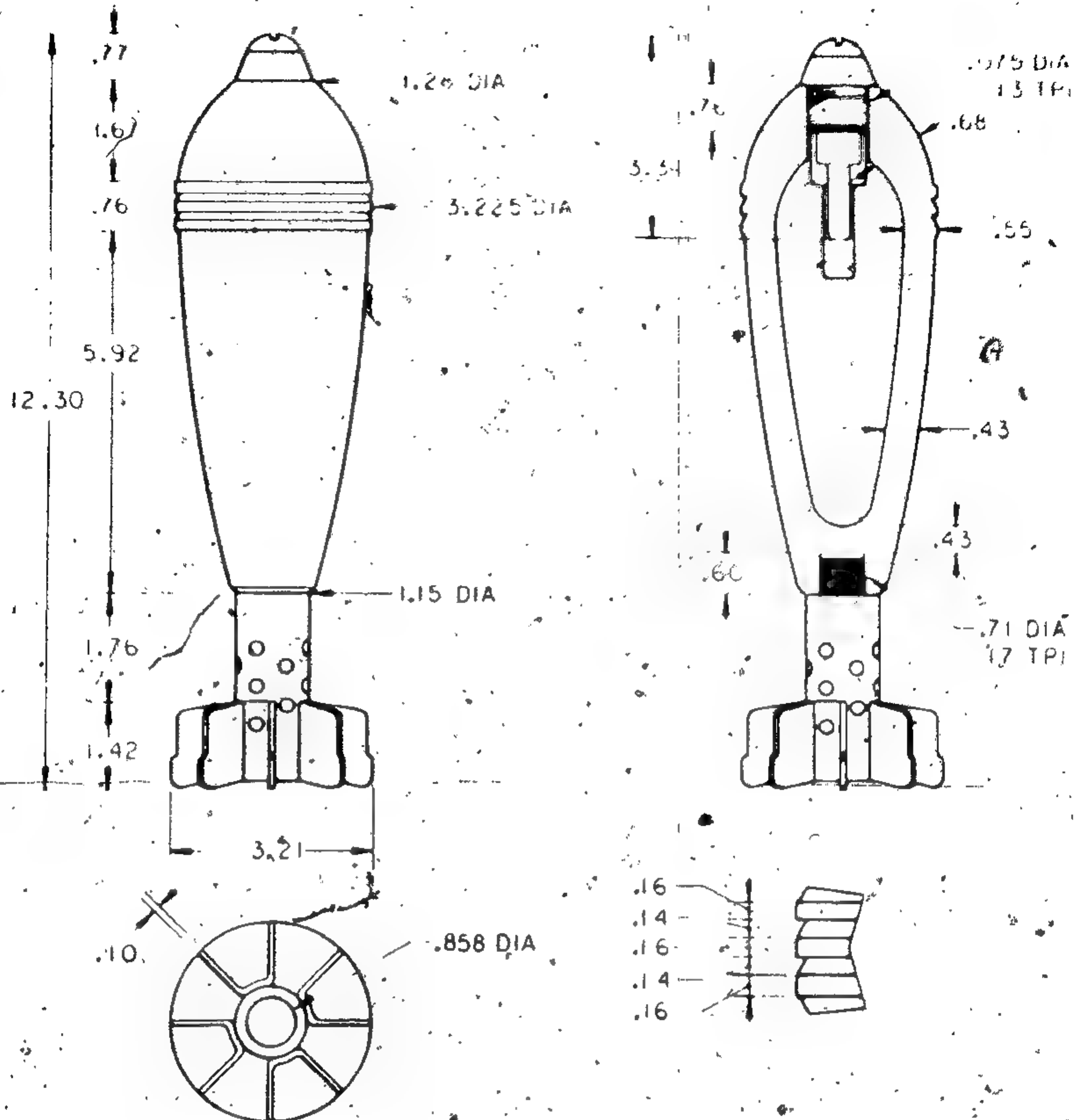
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Neg. 502931

ALL DIMENSIONS IN INCHES

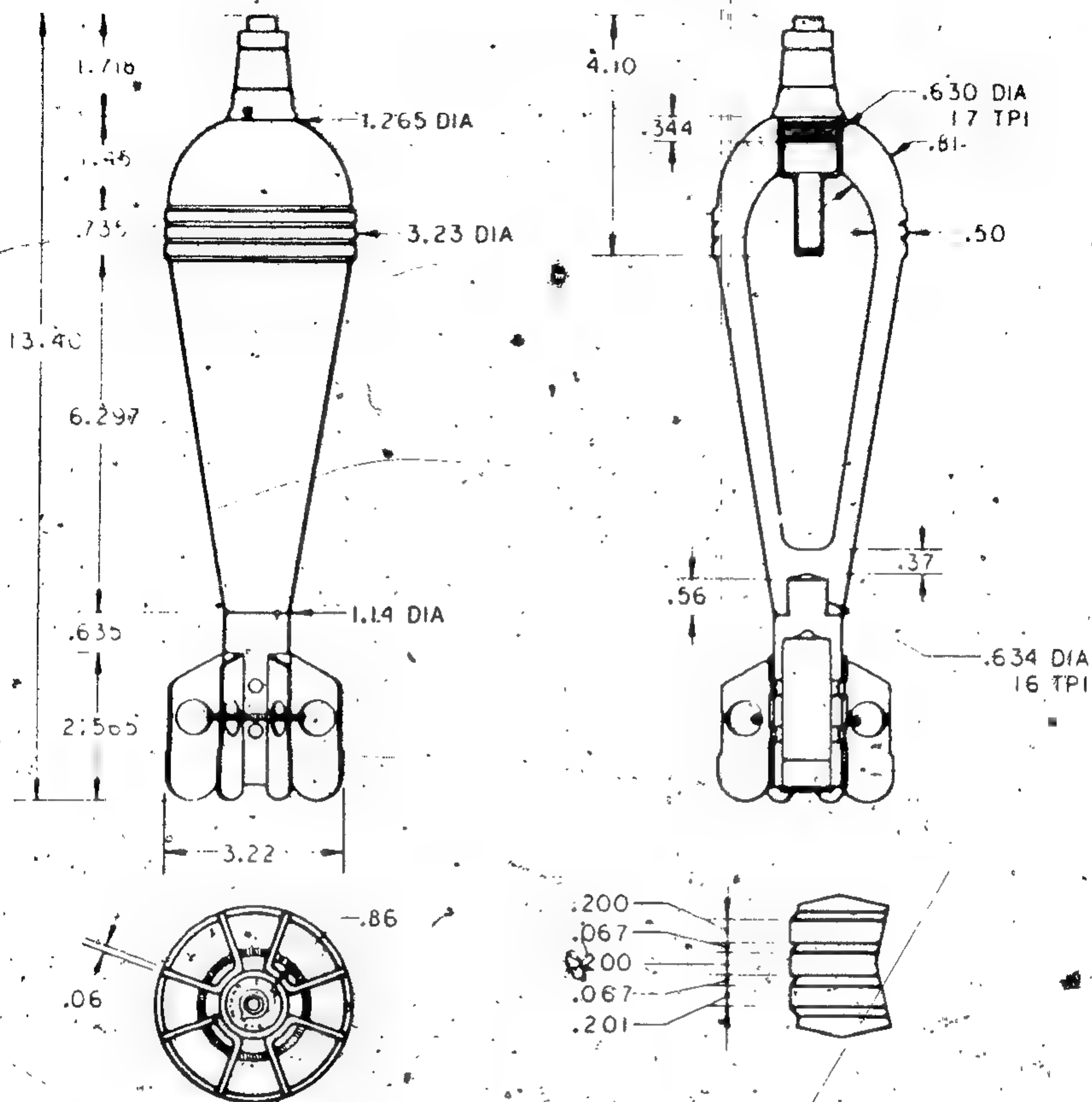
Caliber	82 mm	Fuze	Type 9 point detonating
Identification	20		
Type	Frag	Known using	
Weight (fuzed)	8.42 lb	weapons	Mortars Types 20 and 53
Bursting charge	0.31 lb commercial dynamite		

Figure 124. PRC 82-mm frag projectile Type 20.

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Original



Neg. 502932

ALL DIMENSIONS IN INCHES

Caliber	82 mm	Bursting charge	0.55 lb TNT
Identification	20	Fuze	Type 8 point detonating
Type	Frag		
Weight (fuzed)	8.20 lb	Known using weapon	Mortar Type 20

Figure 125. PRC 82-mm frag projectile Type 20. (variant 1)

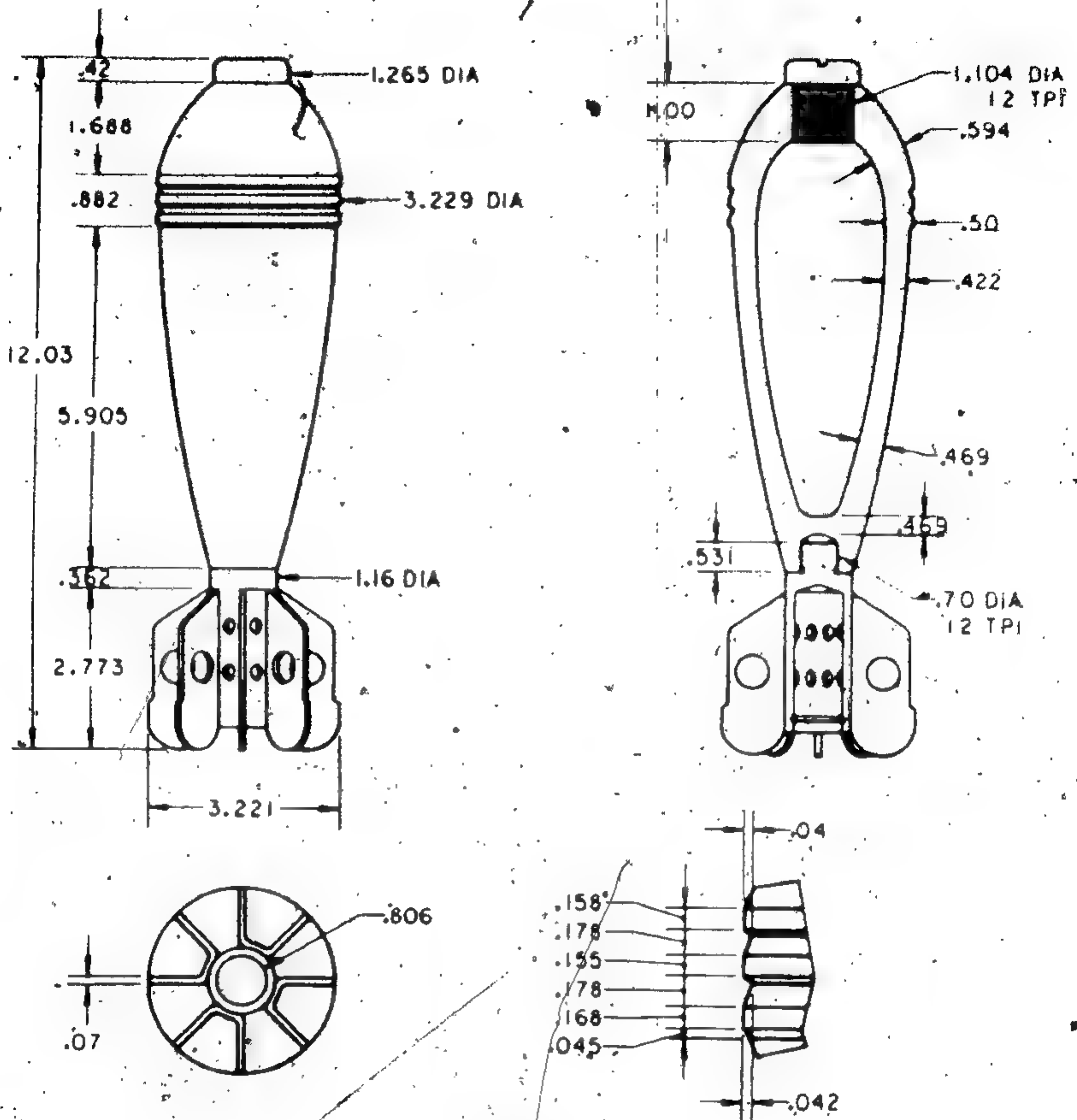
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Neg. 502933

ALL DIMENSIONS IN INCHES

Caliber	82 mm	Fuze	Types 8 and 9
Identification	20		point
Type	HE		detonating
Weight (fuzed)	8.55 lb	Known using	Mortar Type 20
Bursting charge	0.69 lb	weapon	The projectile
	TNT and	Remarks	is illustrated
	potassium		without fuze.
	nitrate		

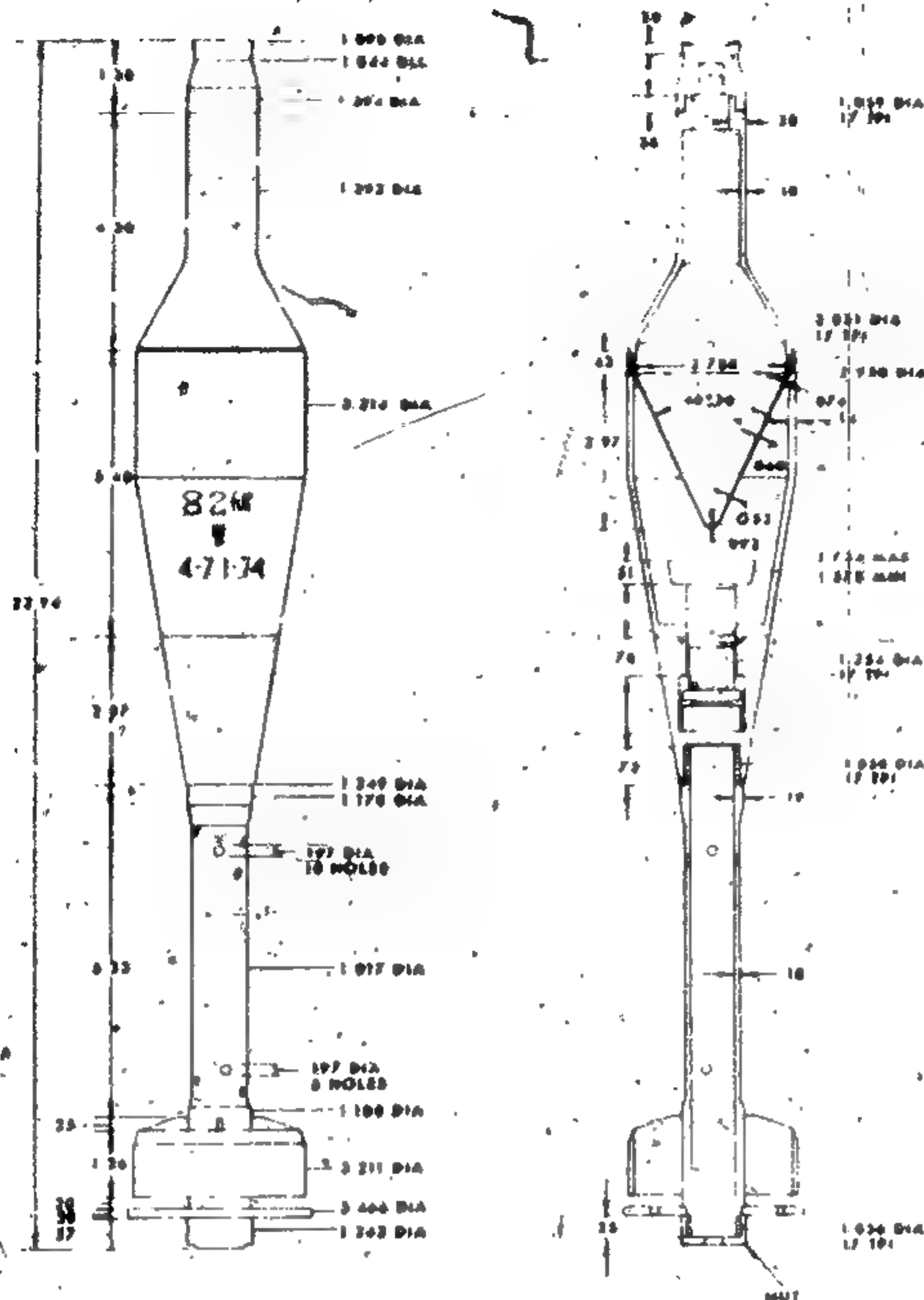
Figure 126. PRC 82-mm HE projectile Type 20. (variant II)

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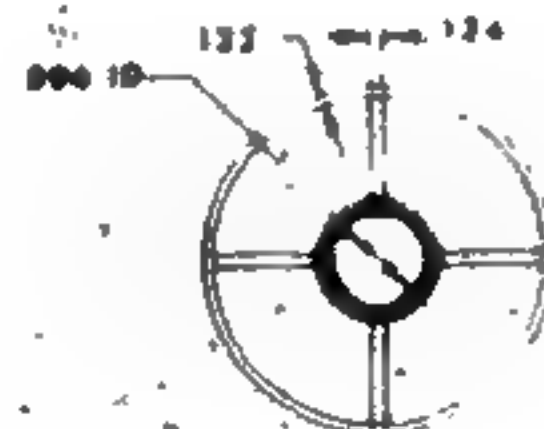
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Original



Neg. 502934



BOTTOM PLAN (MUT REMOVED)

ALL DIMENSION IN INCHES

Caliber	82 mm	Fuze	Type 4 base detonating
Identification	65	Known using	
Type	HEAT	weapon	Type 65 recoilless gun
Weight (fuzed)	6.50 lb	Remarks	Shaped charge liner
Bursting charge	0.93 lb		material is tin-plated
	RDX/ wax		copper.

Figure 126a. PRC 82-mm HEAT projectile Type 65.

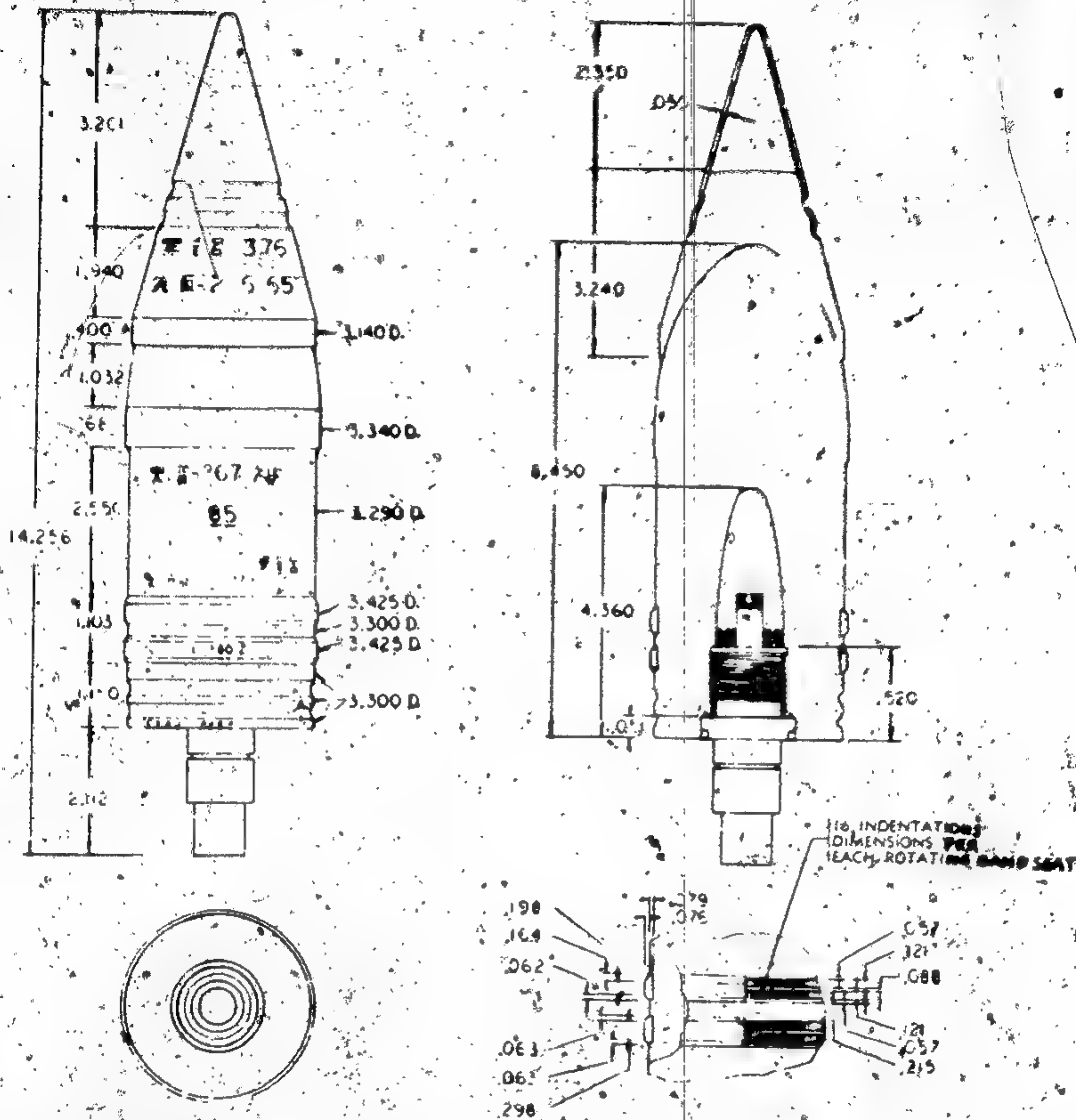
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Original

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ALL DIMENSIONS IN INCHES  
Neg. 502935

Caliber	85 mm	Fuze	Type 2, base detonating
Identification	367.	Known using	Field gun type
Type	APC-T	weapons	56 and light tank type 62
Weight (fuzed)	20.32 lb	Remarks	Fuze is copy of Soviet DBR-2.
Bursting charge	0.28 lb RDX/ aluminum/ wax		

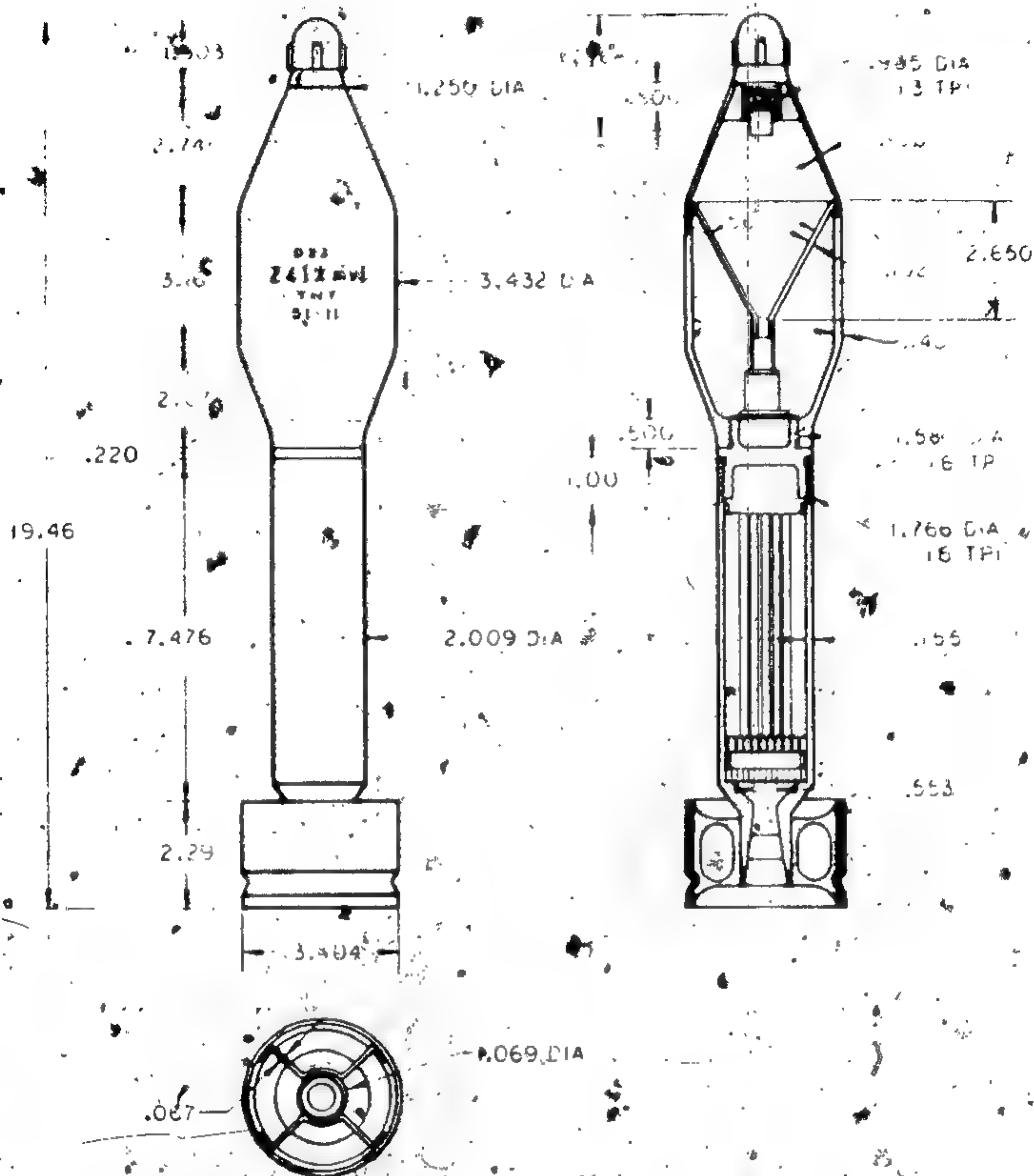
Figure 126b: PRC 85-mm APC-T projectile Type 367.

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Original



Neg. 502936

ALL DIMENSIONS IN INCHES

Caliber	87 mm	Bursting charge	1.30 lb TNT
Identification	241	Fuze	Type 137 PIBD
Type	HEAT	Known using	
Weight (fuzed)	8.42 lb	weapon	Rocket launcher
			Type 51

Figure 127. PRC 87-mm HEAT projectile Type 241.

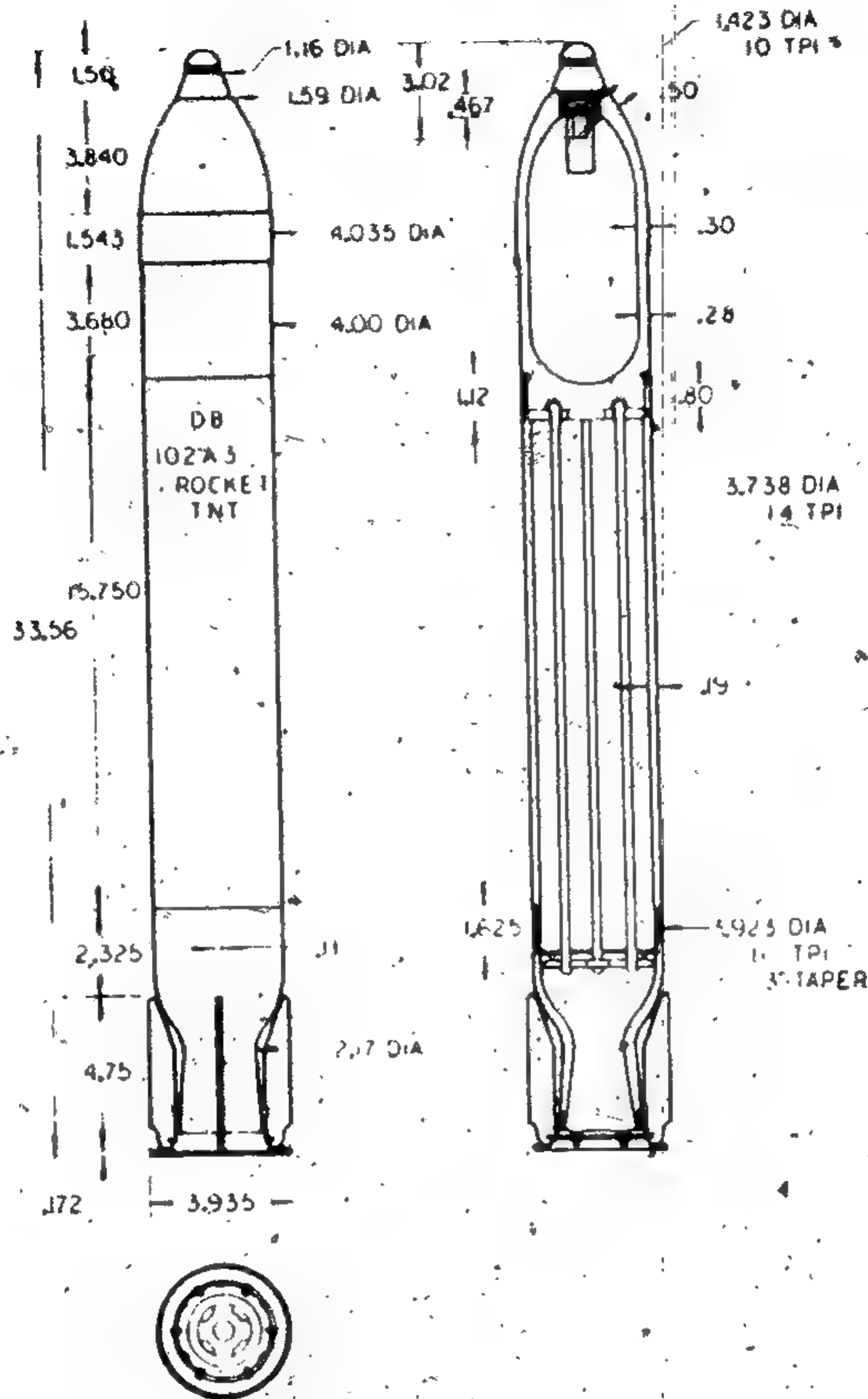
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Neg. 502937  
ALL DIMENSIONS IN INCHES

Caliber -----	102 mm	Bursting charge -----	2.76 lb TNT
Identification -----	102A3	Fuze -----	Type (?)
Type -----	HE		point
Weight (fuzed) -----	37.0 lb		detonating
		Known using weapon -----	Rocket launcher (?)
		Remarks -----	A variation of this projectile exists.

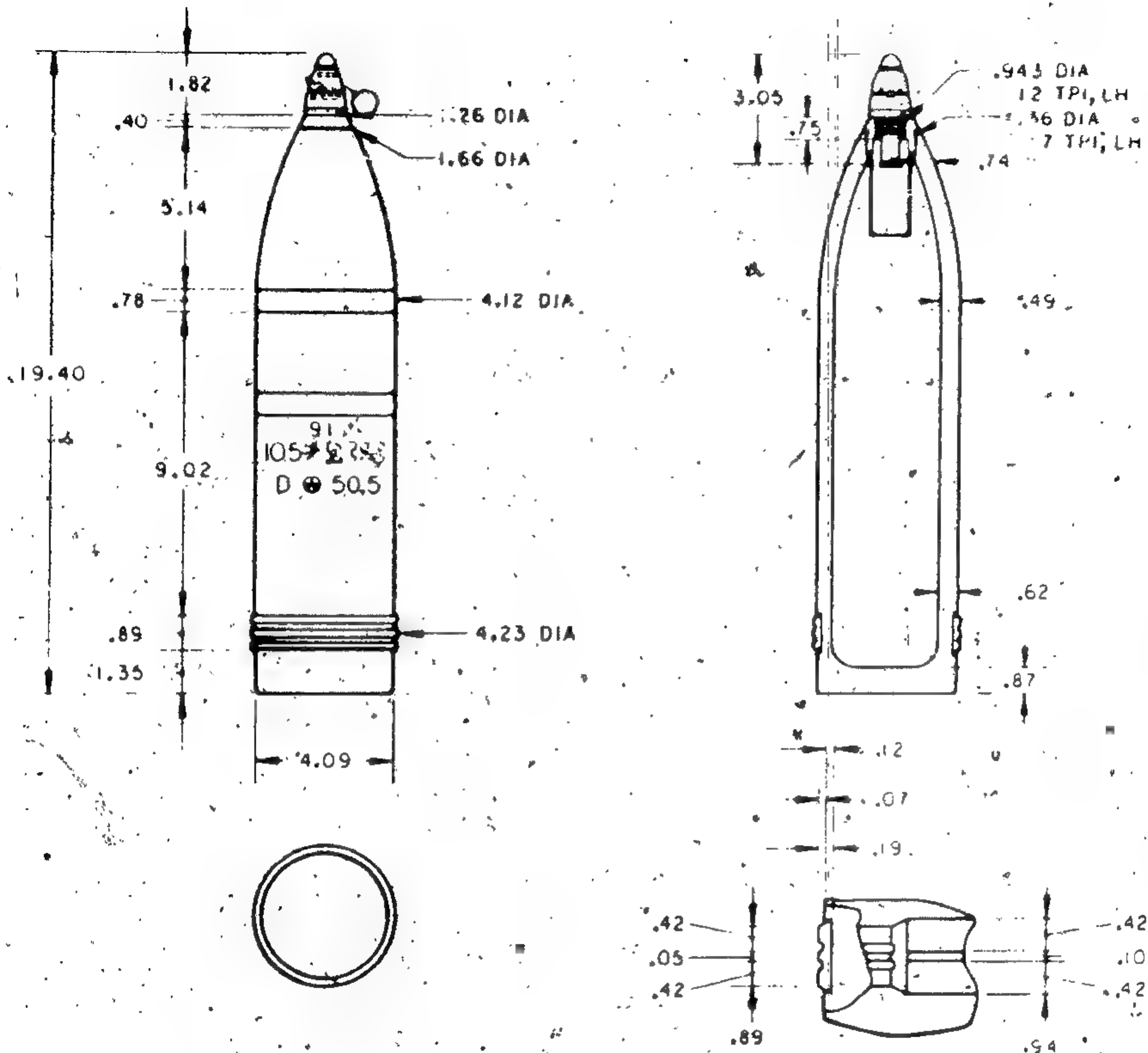
Figure 128. PRC 102-mm HE projectile Type 102A3.

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Original



Neg. 502938.

ALL DIMENSIONS IN INCHES

Caliber	105 mm	Known using	
Identification	91	weapons	Howitzer Type 91 and field guns Type 38 and 92
Type	HE		
Weight (fuzed)	35.09 lb		
Bursting charge	2.53 lb TNT		
Fuze	Type 88	Remarks	All the using weapons are of Japanese WWII design.
point detonating (delay)			

Figure 129. PRC 105-mm HE projectile Type 91.

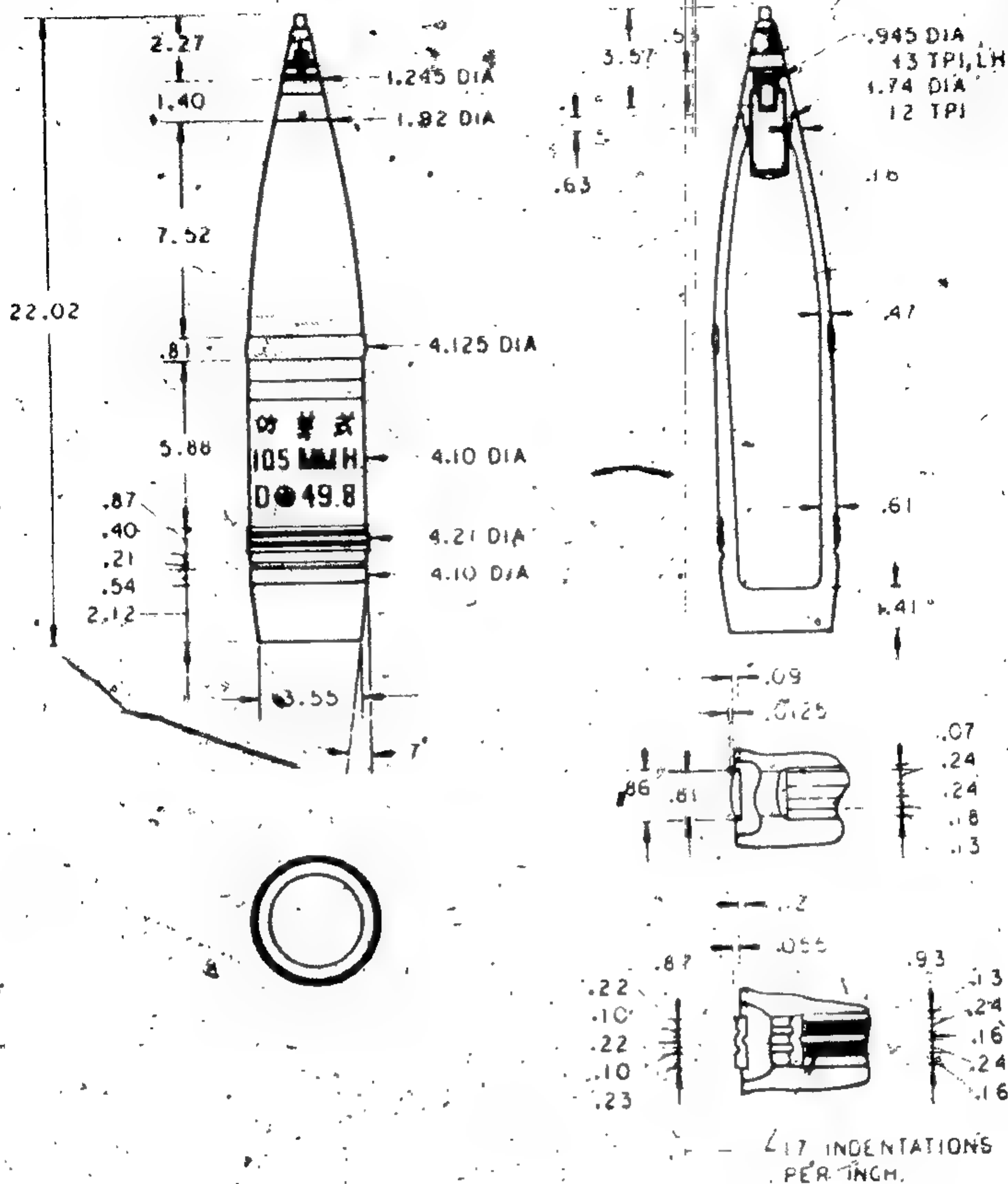
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Original

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Neg. 502939

ALL DIMENSIONS IN INCHES

Caliber	105 mm	Fuze	Type 88 point detonating
Identification	91		
Type	HE	Known using	
Weight (fuzed)	34.87 lb	weapons	Howitzer Model 91 and field guns
Bursting charge	5.22 lb TNT		Types 38 and 92
		Remarks	All the using weapons are of Japanese design.

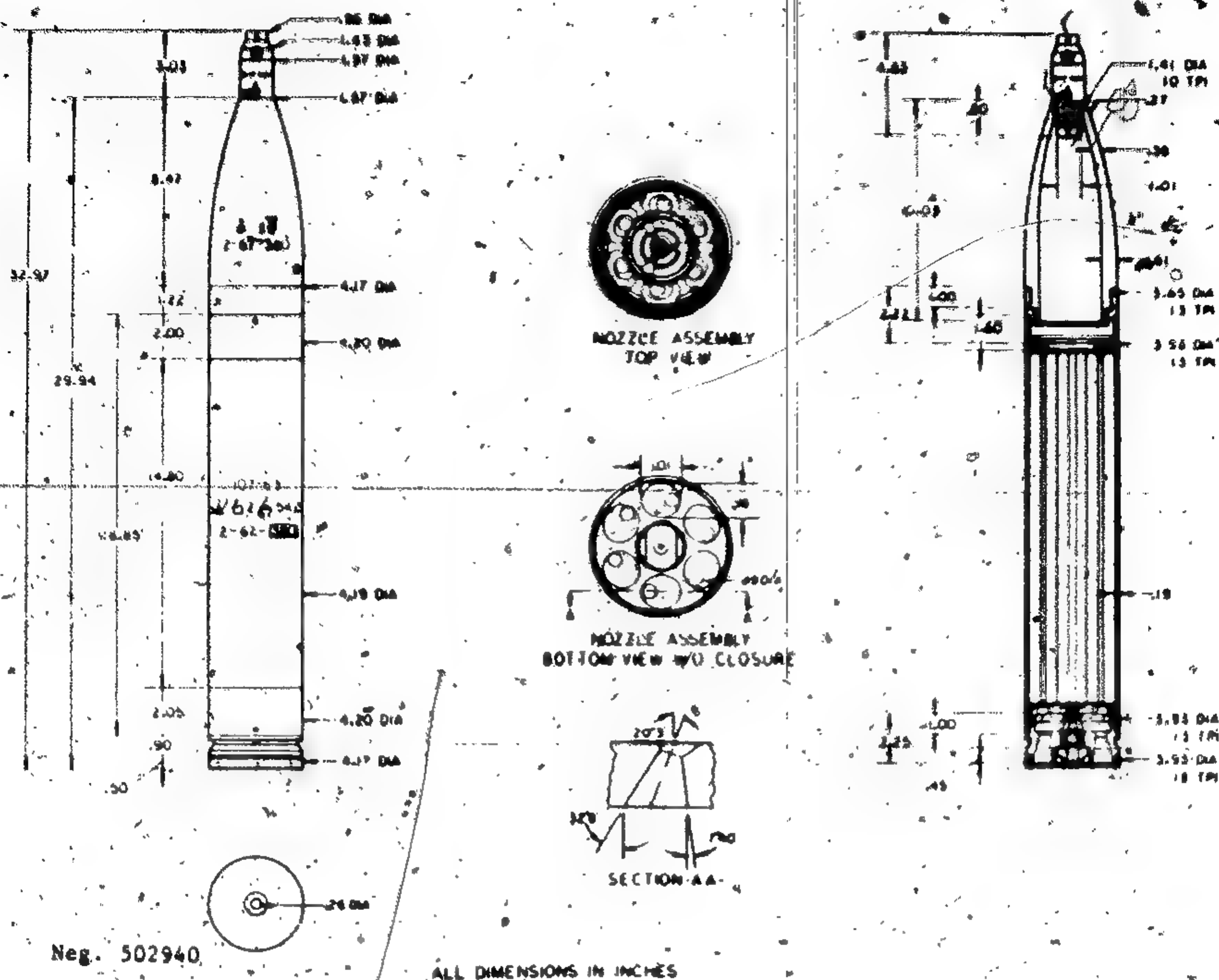
Figure 130. PRC 105-mm HE projectile Type 91. (variant)

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Caliber	107 mm	Fuze	Type 1 point detonating
Identification	63	Known using	
Type	HE	weapon	M1963 12-round launcher
Weight (fuzed)	41.86 lb	Remarks	Fuze is modified copy
Bursting charge	2.83 lb TNT		of Soviet Model V-25.

Figure 131. PRC 107-mm HE projectile Type 63.

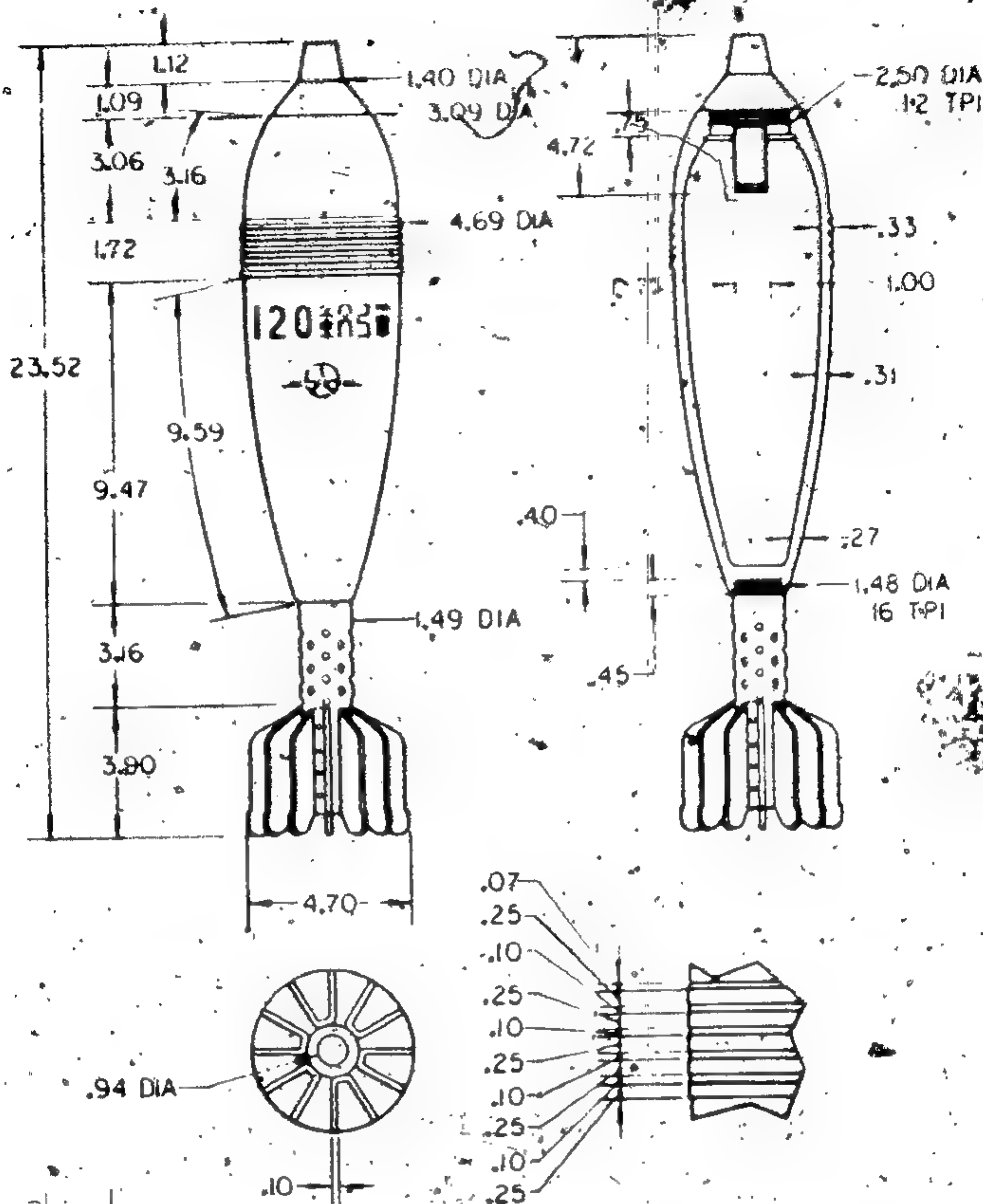
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Original

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Neg. 502941

ALL DIMENSIONS IN INCHES

Caliber	120 mm	Bursting charge	6.27 lb TNT
Identification	33	Fuze	Types 1 and 7
Type	HE		point detonating
Weight (fuzed)	27.84 lb	Known using	Mortar Type 33
		weapon	

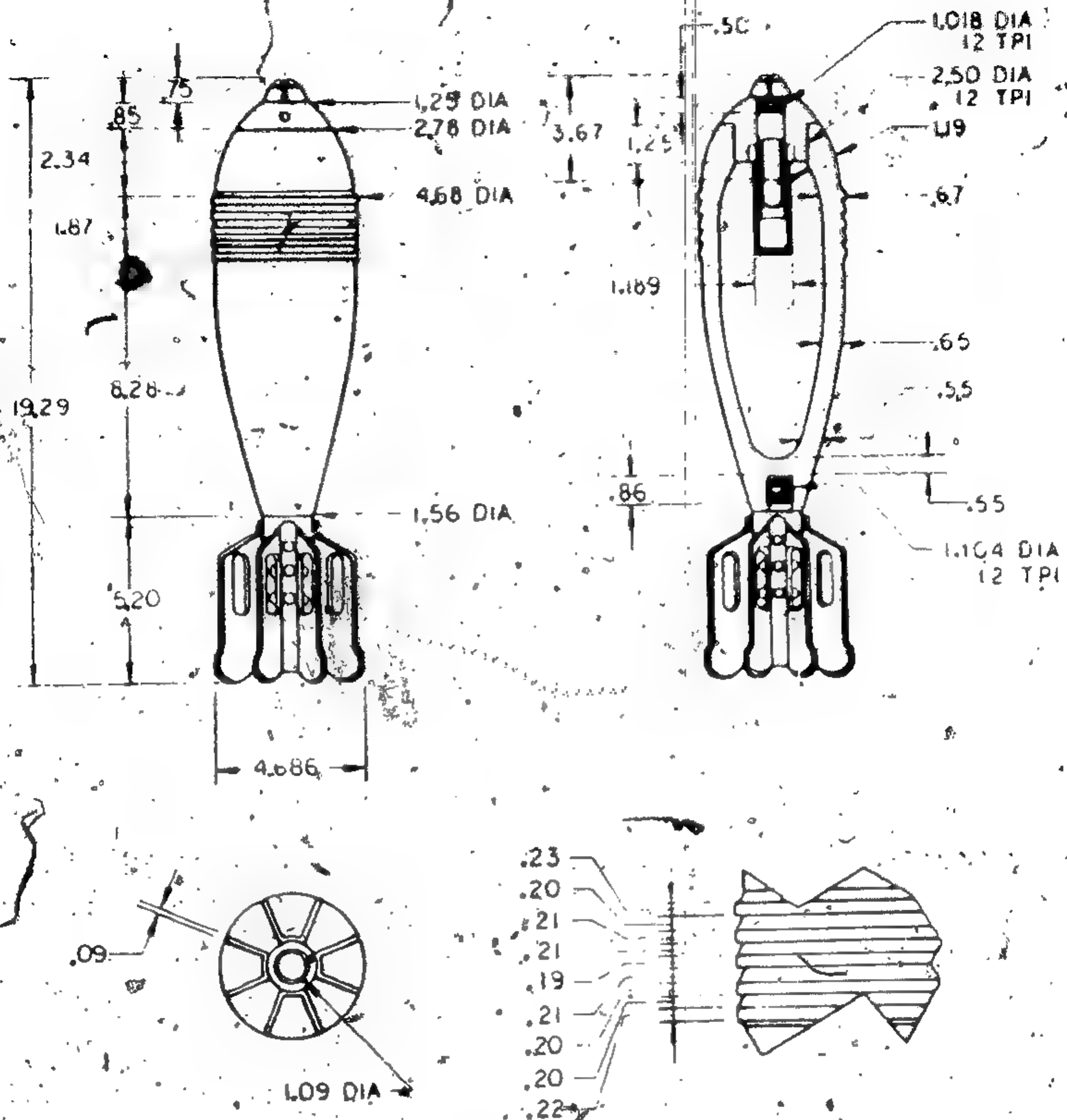
Figure 132. PRC 120-mm HE projectile Type 33 (long body).

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Original



Neg. 502942

ALL DIMENSIONS IN INCHES

Caliber	120 mm	Bursting charge	3.48 lb TNT/ potassium nitrate
Identification	33	Fuze	Type 9 point detonating
Type	Frag	Known using weapon	Mortar Type 33
Weight (fuzed)	28.71 lb		

Figure 133. PRC 120-mm frag projectile Type 33 (short body).

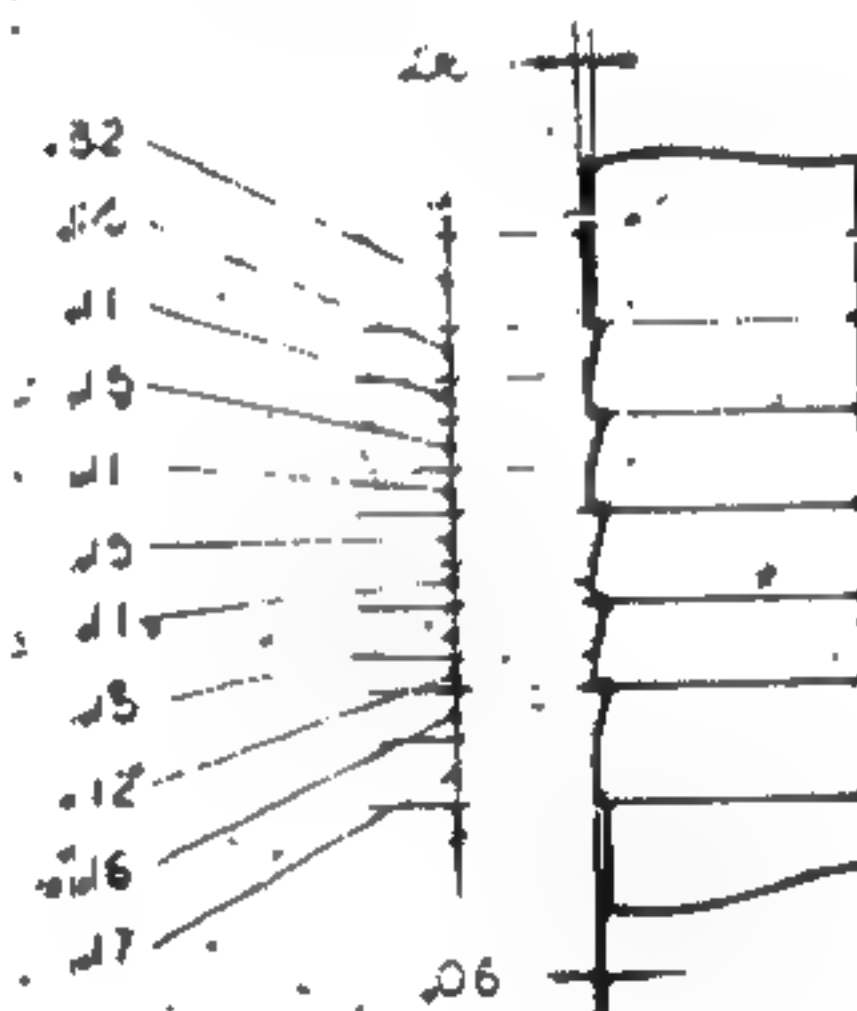
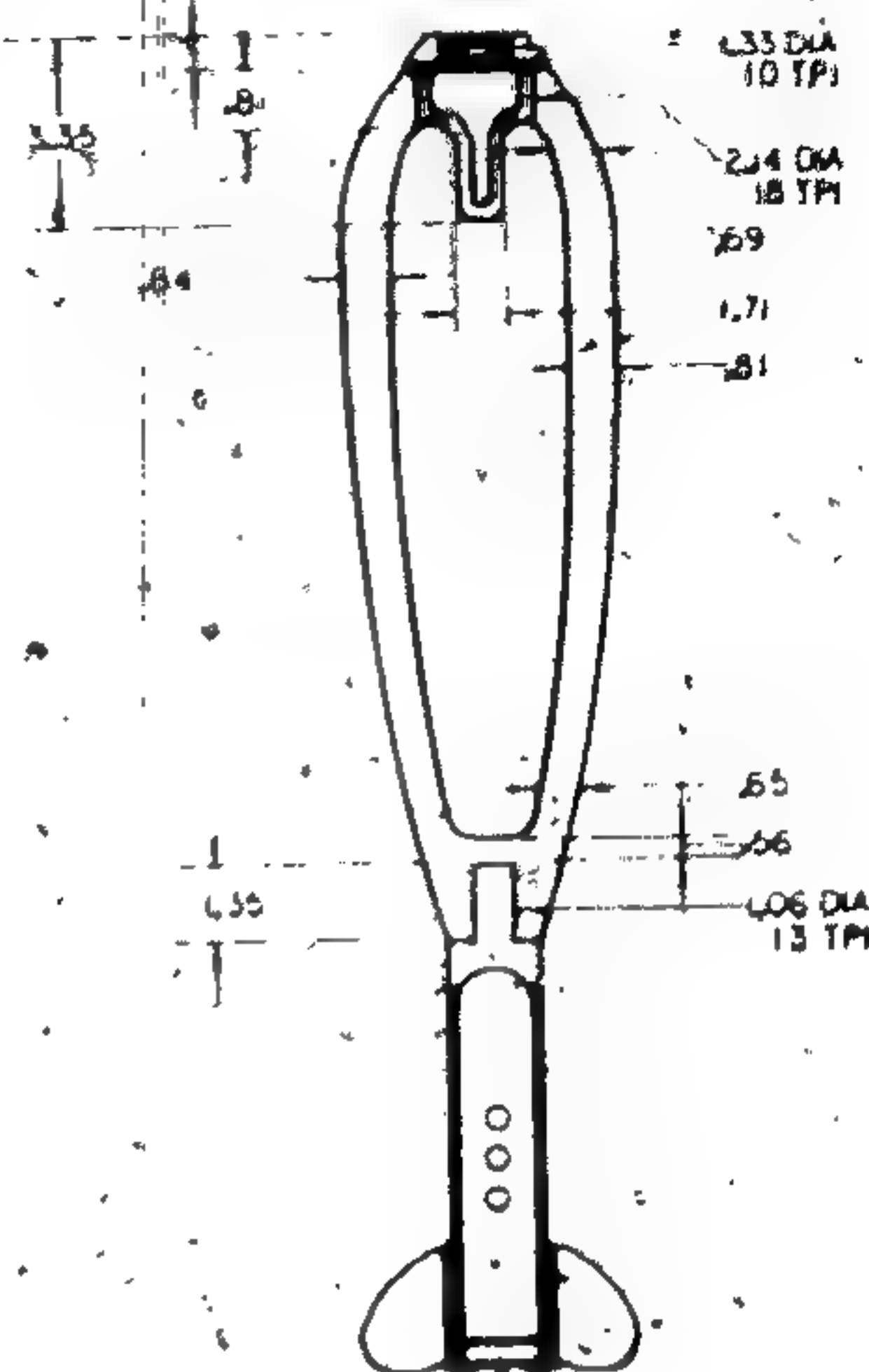
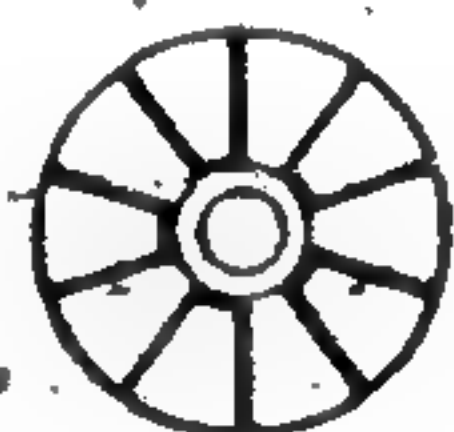
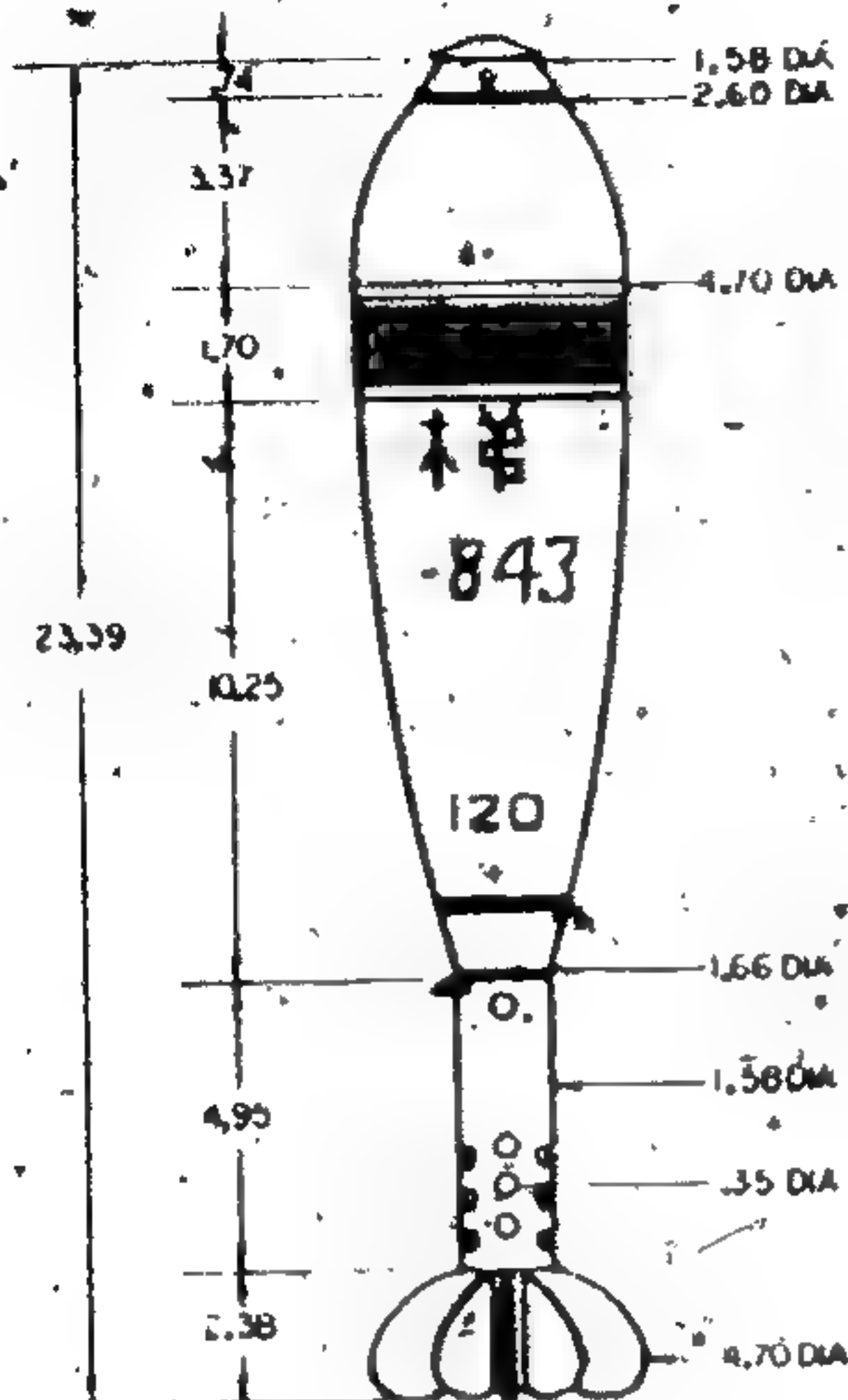
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Original

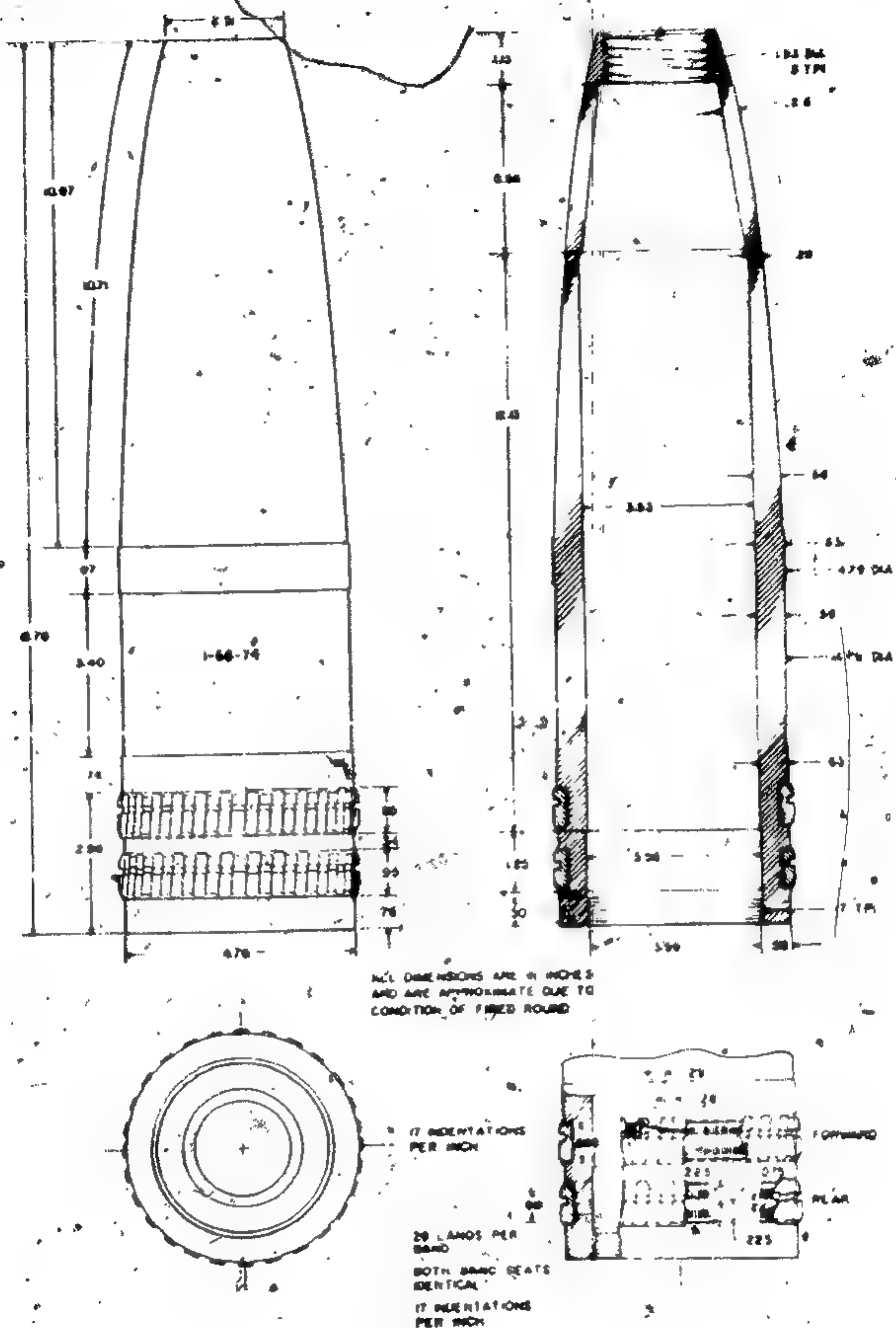
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Original



Neg: 502944

ALL DIMENSIONS IN INCHES

Caliber	122 mm	Fuze	Type (?) time
Identification	(?)	Known using	
Type	Propaganda	weapon	Soviet field gun D-74
Weight (fuzed)	66.00 lb (?)	Remarks	Projectile shown has
Ejection charge	Black powder		been fired. Base
			plug and fuze are
			missing.

Figure 134a. PRC 122-mm propaganda projectile Type (?).

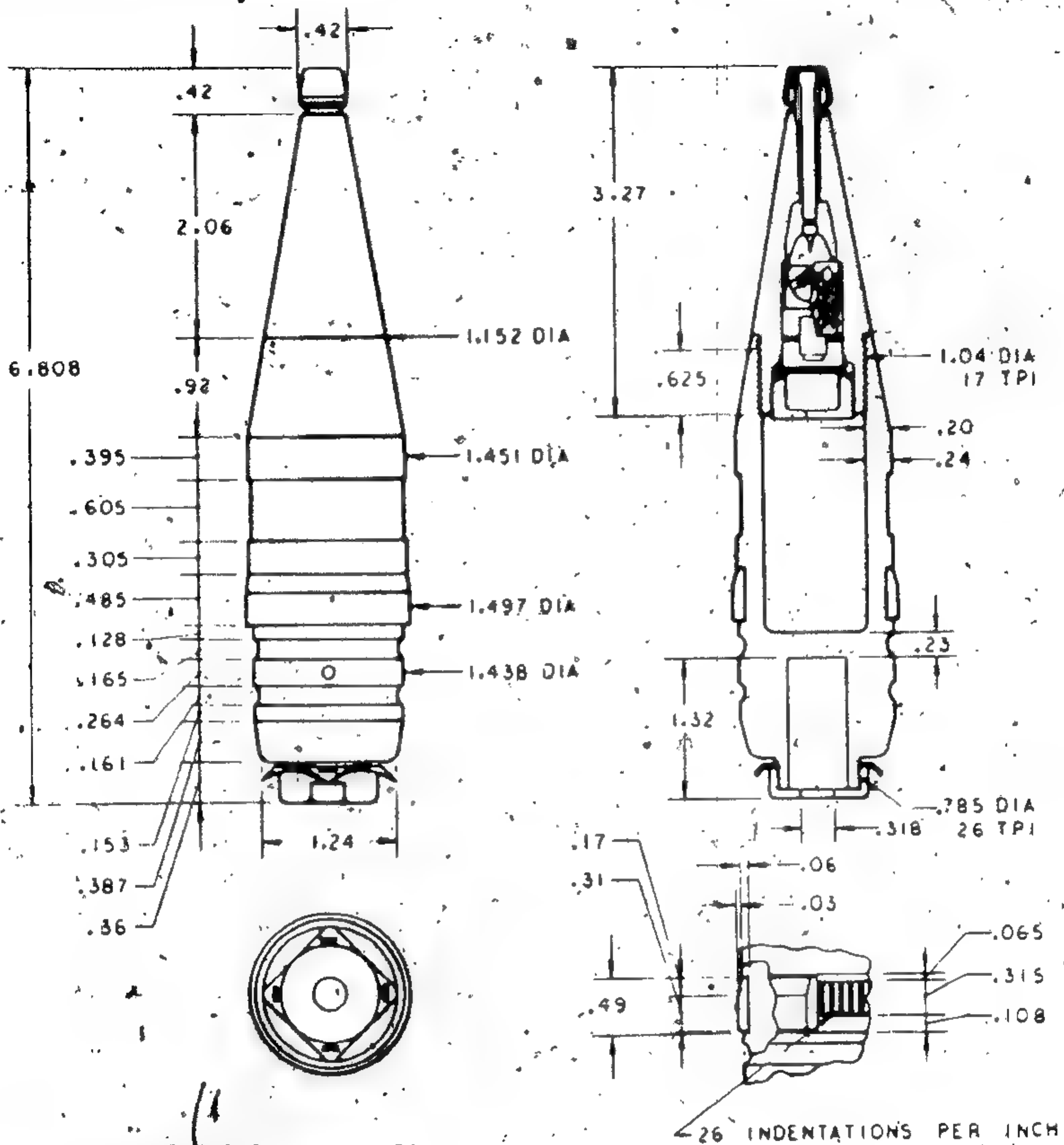
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ALL DIMENSIONS IN INCHES  
Neg. 502945

Caliber	37 mm
Identification	OZT
Type	HEI-T
Weight (fuzed)	1.60 lb
Bursting charge	0.08 lb RDX/ aluminum
Fuze	Model A-37 point detonating self-destroying

Known using weapon	Aircraft cannon Model N
Remarks	Using weapon. is of Soviet origin. Pro- jectile is copy of Soviet Model OZT.

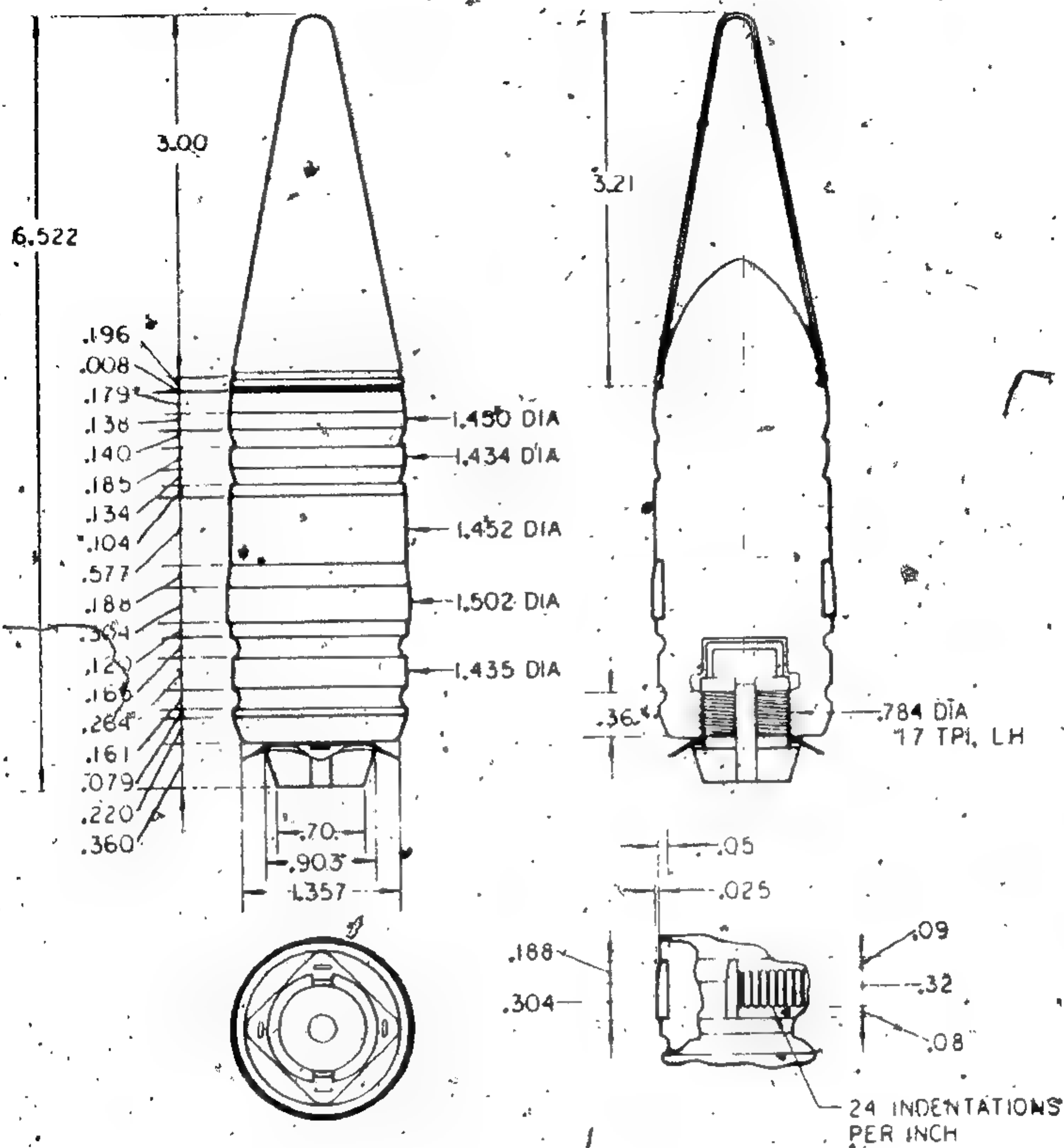
Figure 135. Czechoslovak 37-mm HEI-T projectile Model OZT.

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Neg. 502946

ALL DIMENSIONS IN INCHES

Caliber	37 mm	Known using	
Identification	BZT	weapon	Aircraft
Type	AP-T		cannon Model
Weight	1.66 lb		N
Remarks	Using weapon is of Soviet origin. Projectile is copy of Soviet Model BZT.		

Figure 136. Czechoslovak 37-mm AP-T projectile Model BZT.

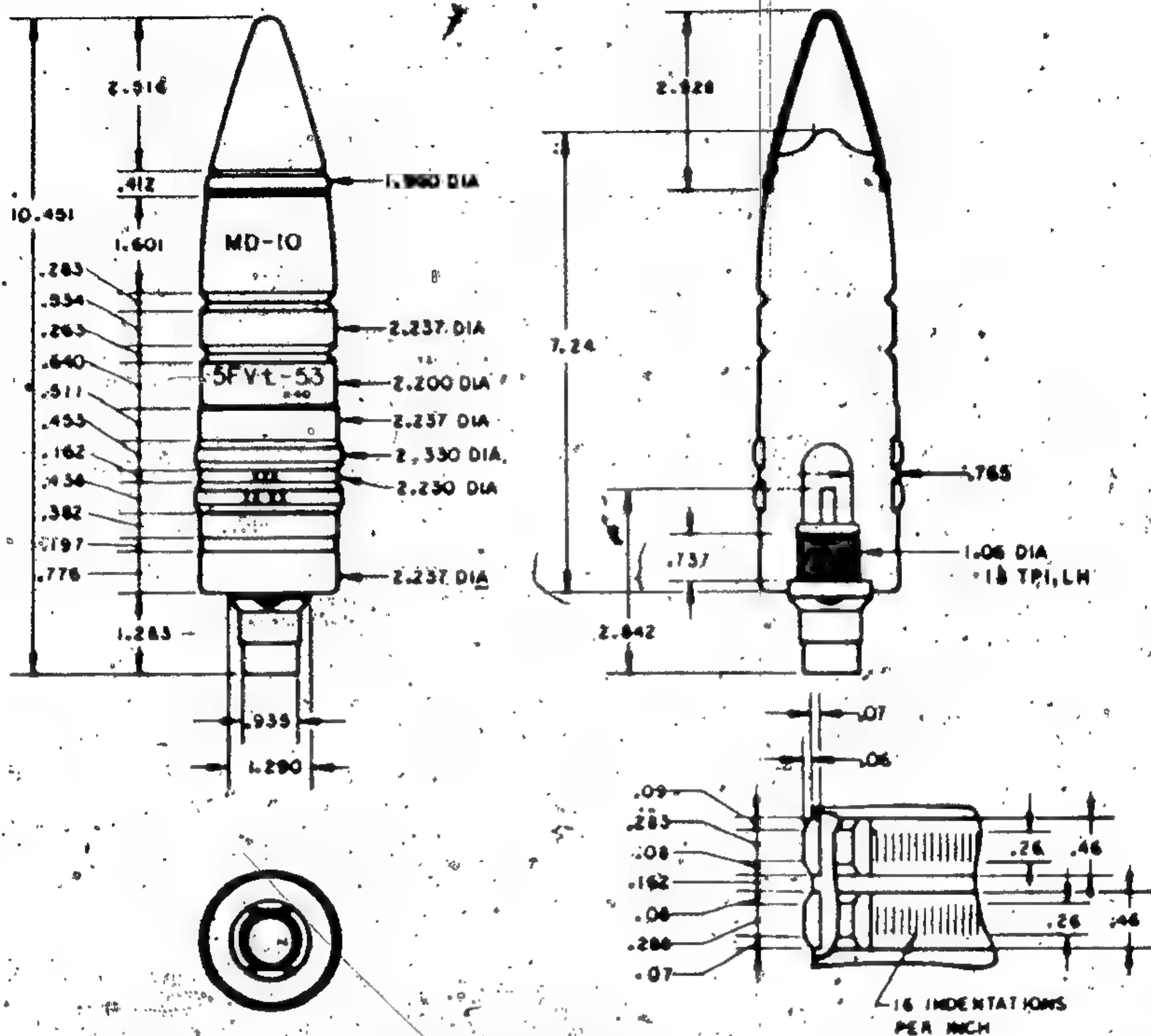
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Neg. 502947

ALL DIMENSIONS IN INCHES

Caliber	57 mm	Fuze	Model MD-10 base detonating
Identification	(?)	Known using	
Type	AP-T	weapons	AT guns M1943 (ZIS-2), APAT, and ASU-57
Weight (fuzed)	6.95 lb	Remarks	Using weapons are of Soviet origin. Projectile is copy of Soviet Model UBR-271.
Bursting charge	0.03 lb RDX		

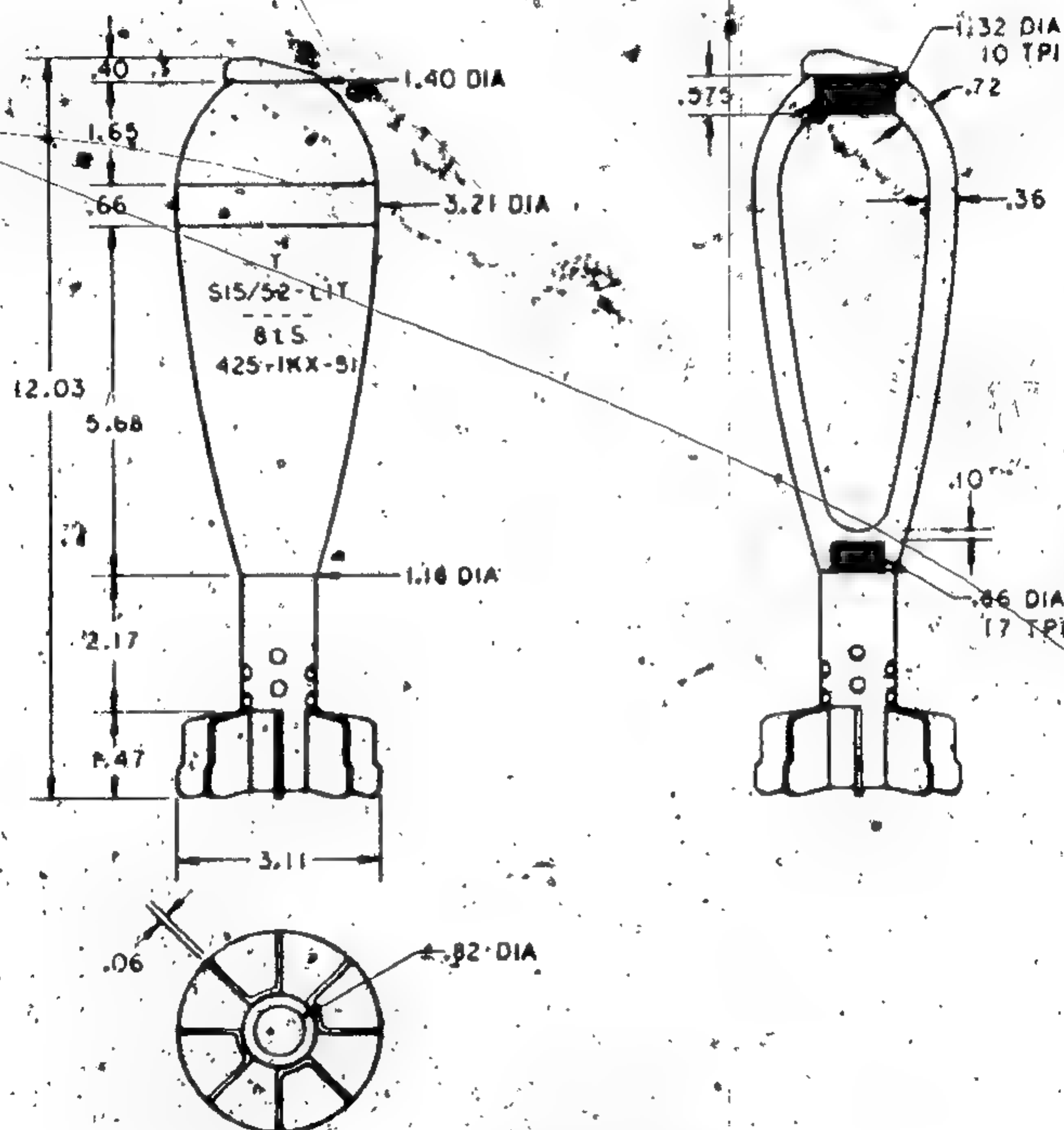
Figure 137. Czechoslovak 57-mm AP-T projectile Model (?).

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Neg. 502948

ALL DIMENSIONS IN INCHES

Caliber	82 mm	Fuze	Model (?) point
Identification	IKX-51		detonating
Type	Frag	Known using	
Weight (fuzed)	7.01 lb	weapons	Mortar M1948
Bursting charge	1.25 lb TNT	Remarks	Weight is without fuze as illustrated.

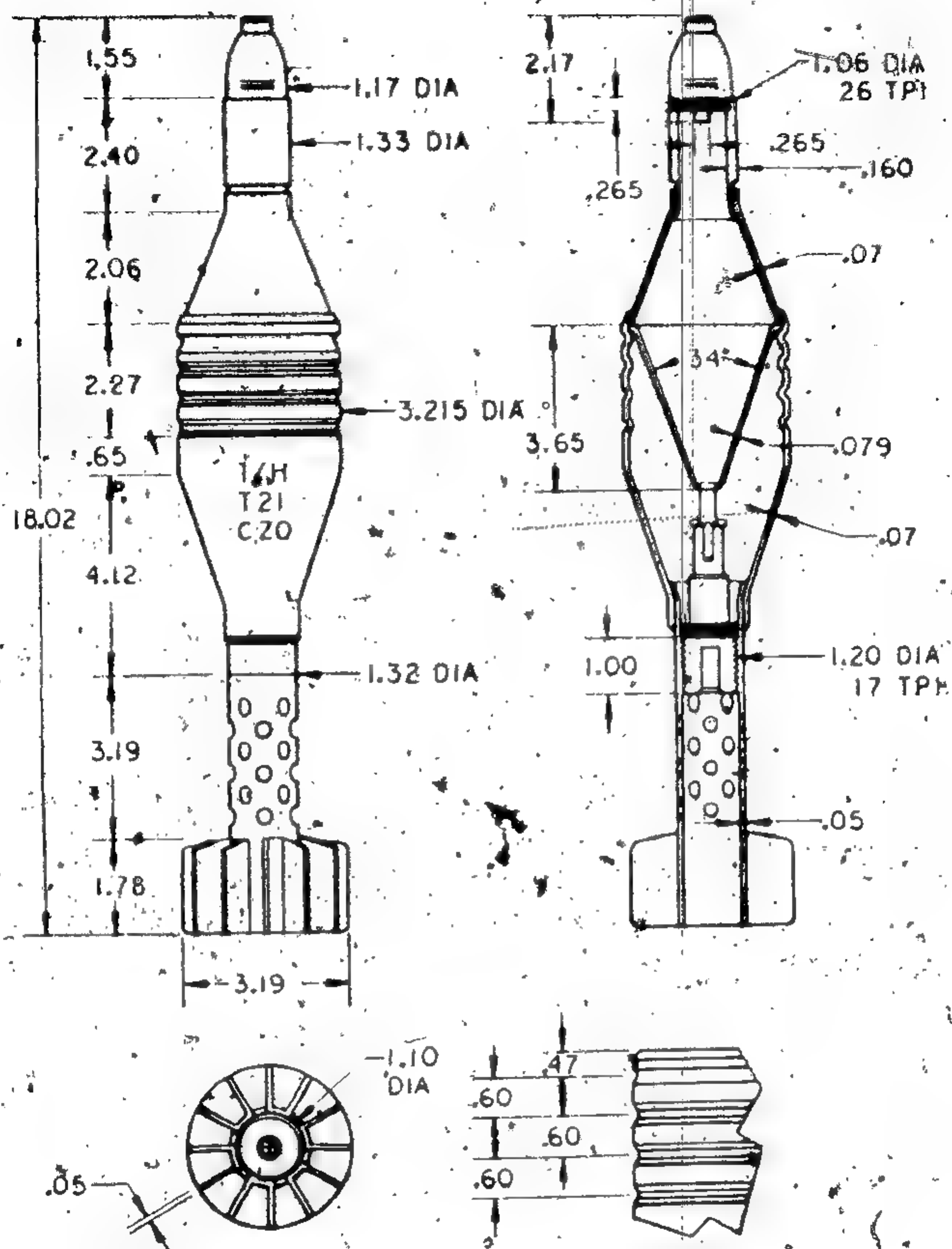
Figure 138. Czechoslovak 82-mm frag projectile Model IKX-51.



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Neg. 502949

ALL DIMENSIONS IN INCHES

Caliber	82 mm	Bursting charge	1.28 lb RDX/TNT
Identification	T-21	Fuze	Model Z-21 PIBD
Type	HEAT	Known using	
Weight (fuzed)	4.71 lb	weapon	Recoilless gun T-21

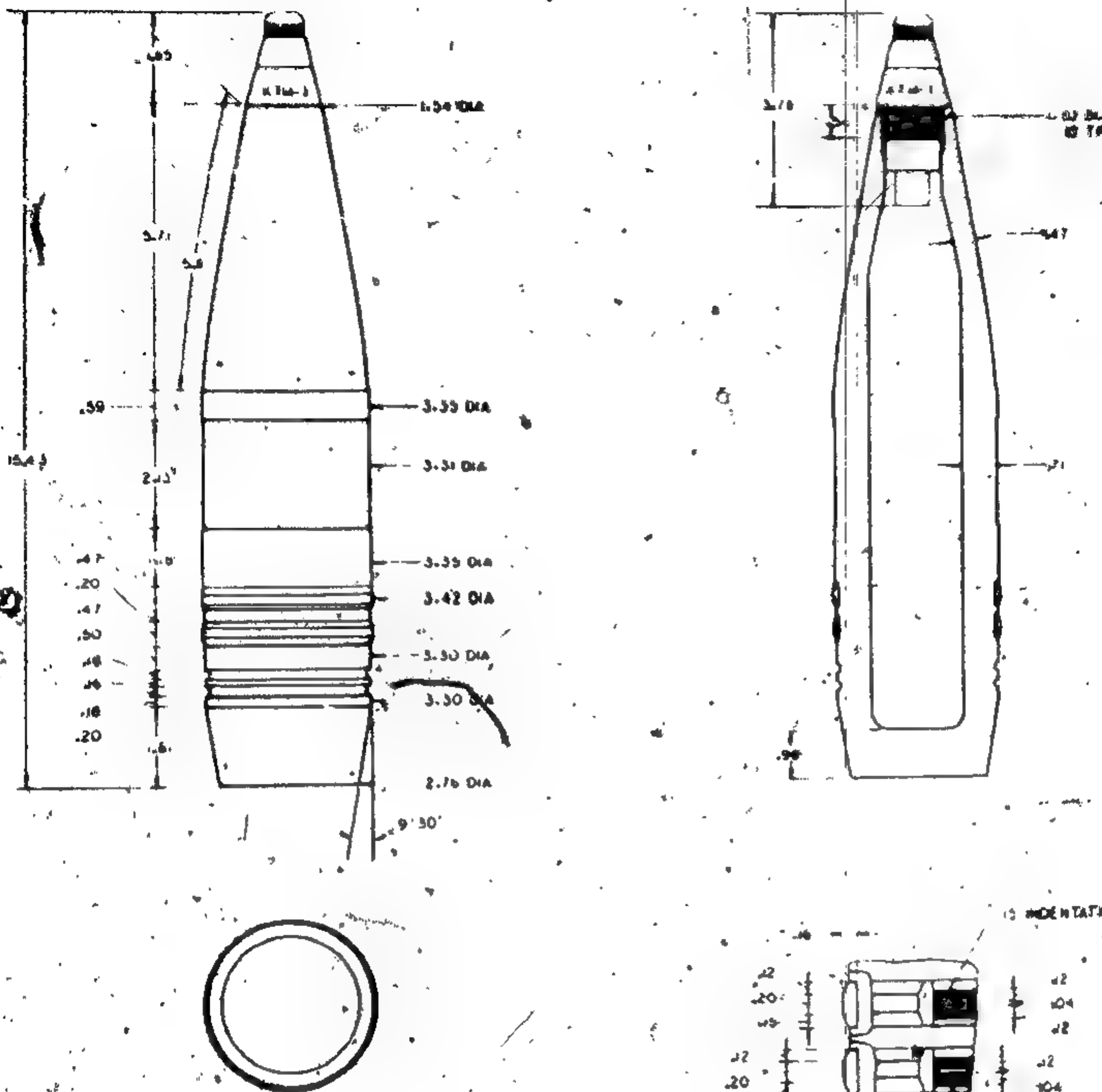
Figure 139. Czechoslovak 82-mm HEAT projectile Model T-21.

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Original



ALL DIMENSIONS IN INCHES

Ref. 502930

Caliber	85 mm	Fuze	Model KTM-1-U point
Identification	OF		detonating
Type	Frag	Known using	
Weight (fuzed)	18.41 lb	weapons	Field gun M52, AA gun
Bursting charge	1.71 (?)		PLK-39, and tank gun
	1b TNT		T-44
		Remarks	Projectile is copy of
			Soviet Model O-365K.

Figure 140. Czechoslovak 85-mm frag projectile Model OF.

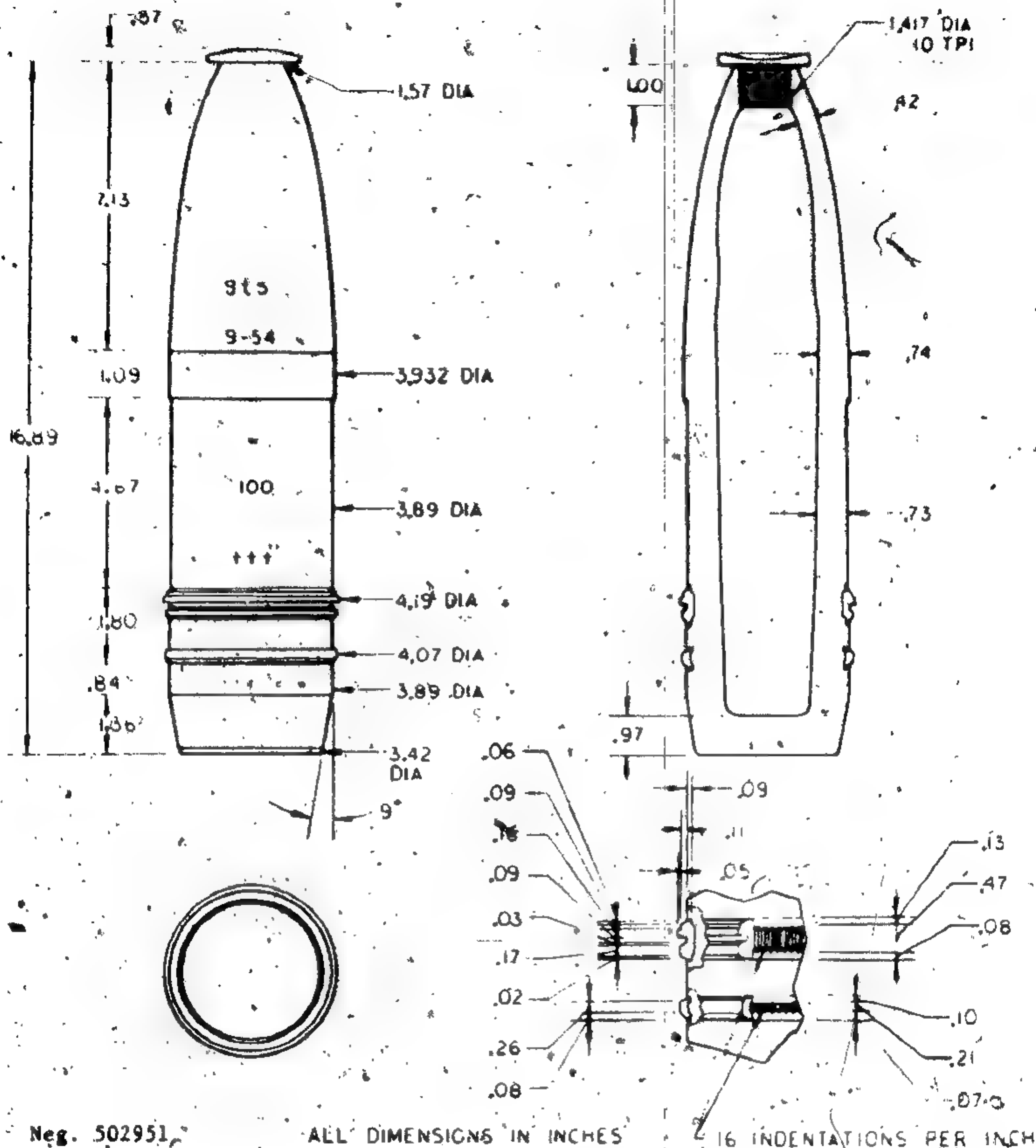
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Original

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Neg. 502951

ALL DIMENSIONS IN INCHES

16 INDENTATIONS PER INCH

Caliber	100 mm	Fuze	Model NZ10AV point detonating
Identification	OF	Known using	
Type	HE	weapons	Field gun M1953 and SP assault gun M1944
Weight (fuzed)	35.16 lb	Remarks	Illustrated without fuze. Projectile is copy of Soviet Model F-412.
Bursting charge	3.5 lb TNT		

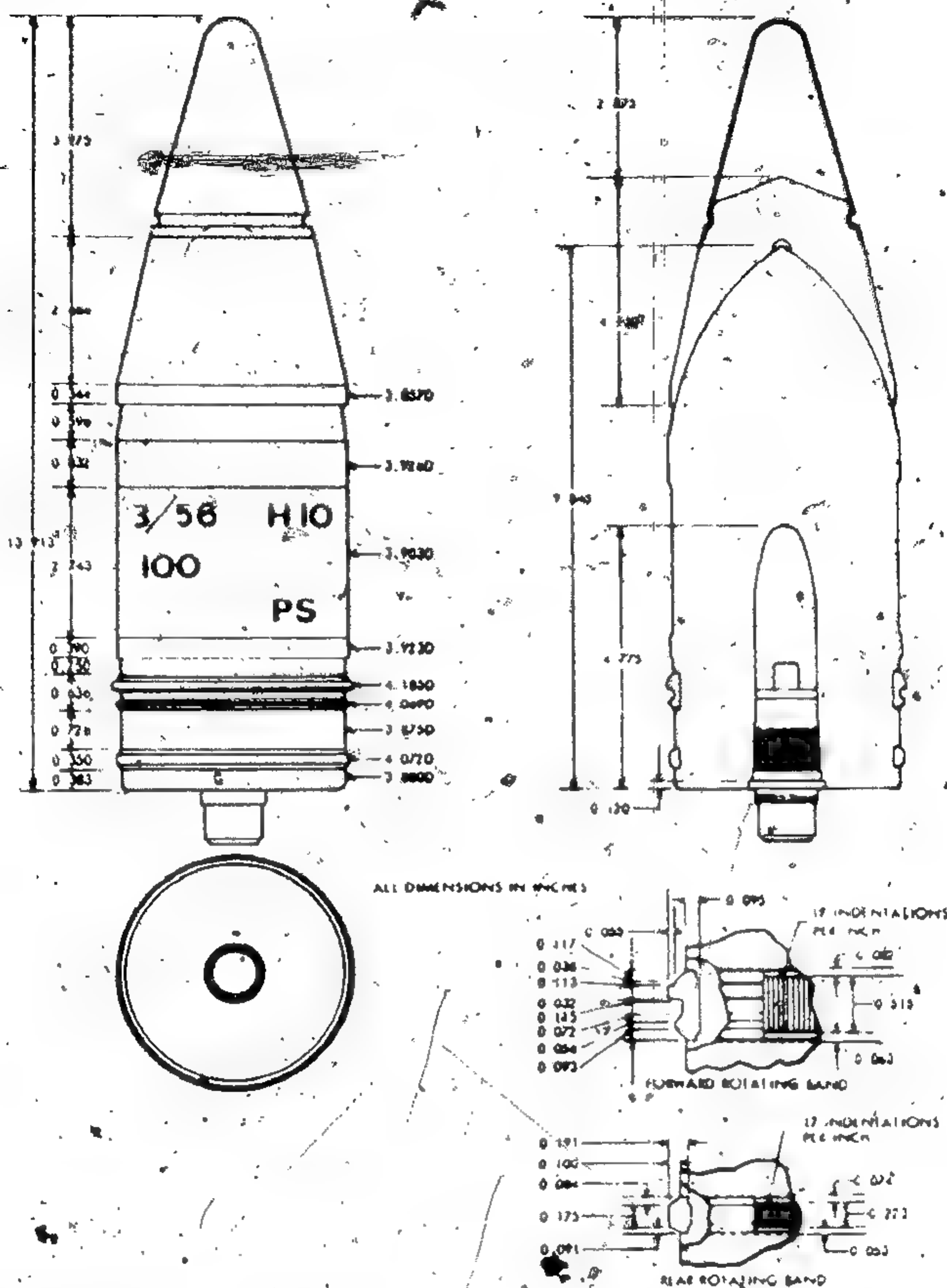
Figure 141. Czechoslovak 100-mm HE projectile Model OF.

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Original



Neg. 502952

Caliber ----- 100 mm  
 Identification ----- PSv  
 Type ----- APC-T  
 Weight (fuzed) ----- 35.25 lb  
 Bursting charge ----- 0.14 lb  
 RDX/wax

Fuze ----- Model PD-30 base  
 detonating  
 Known using -----  
 weapons ----- Field gun M1953 and SP  
 assault gun M1944  
 Remarks ----- Projectile is suspected  
 to be interchangeable  
 with Soviet Model BR-  
 412D.

Figure 142. Czechoslovak 100-mm APC-T projectile Model PSv.

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DEFENSE INTELLIGENCE AGENCY



# PROJECTILE FRAGMENT IDENTIFICATION GUIDE FOREIGN (U)

PREPARED BY  
US ARMY

ARMY MATERIEL COMMAND  
SCIENCE AND TECHNOLOGY CENTER



Original

Technical drawings of a rocket motor assembly, including side views and a cross-section.

**Left Side View (Front View):**

- Overall height: 26.14
- Top section height: 2.28
- Top section diameter: 1.57 DIA
- Section below top: 1.685
- Section below that: 1.15
- Section below that: 4.72 DIA
- Section below that: 1.475
- Section below that: 4.60
- Section below that: 2.69
- Base diameter: 4.70
- Internal markings: 6V, 10-53, 120

**Right Side View (Rear View):**

- Top section diameter: 1.40 DIA 10 TPI
- Section below top: 4.02
- Section below that: .50
- Section below that: .65
- Section below that: .96
- Section below that: .57
- Section below that: .54
- Section below that: 1.10 DIA 17 TPI
- Section below that: 2.68
- Section below that: .25

**Bottom View (Cross-section):**

- Overall diameter: 1.065
- Internal features: .10, .30, .20, .20, .25, .20

Neg. 502953 . ALL DIMENSIONS IN INCHES

Caliber -----	120 mm	Fuze -----	Model MZ30AV point
Identification -----	OF-A		detonating
Type -----	HE	Known using	
Weight (fuzed) -----	33.76 lb	weapons -----	Regimental mortars
Bursting charge -----	4.50 lb		M1938 and M1943
	TNT	Remarks -----	Using weapons are of
			Soviet origin.

Figure 143. Czechoslovak 120-mm HE projectile Model OF-A.

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Original

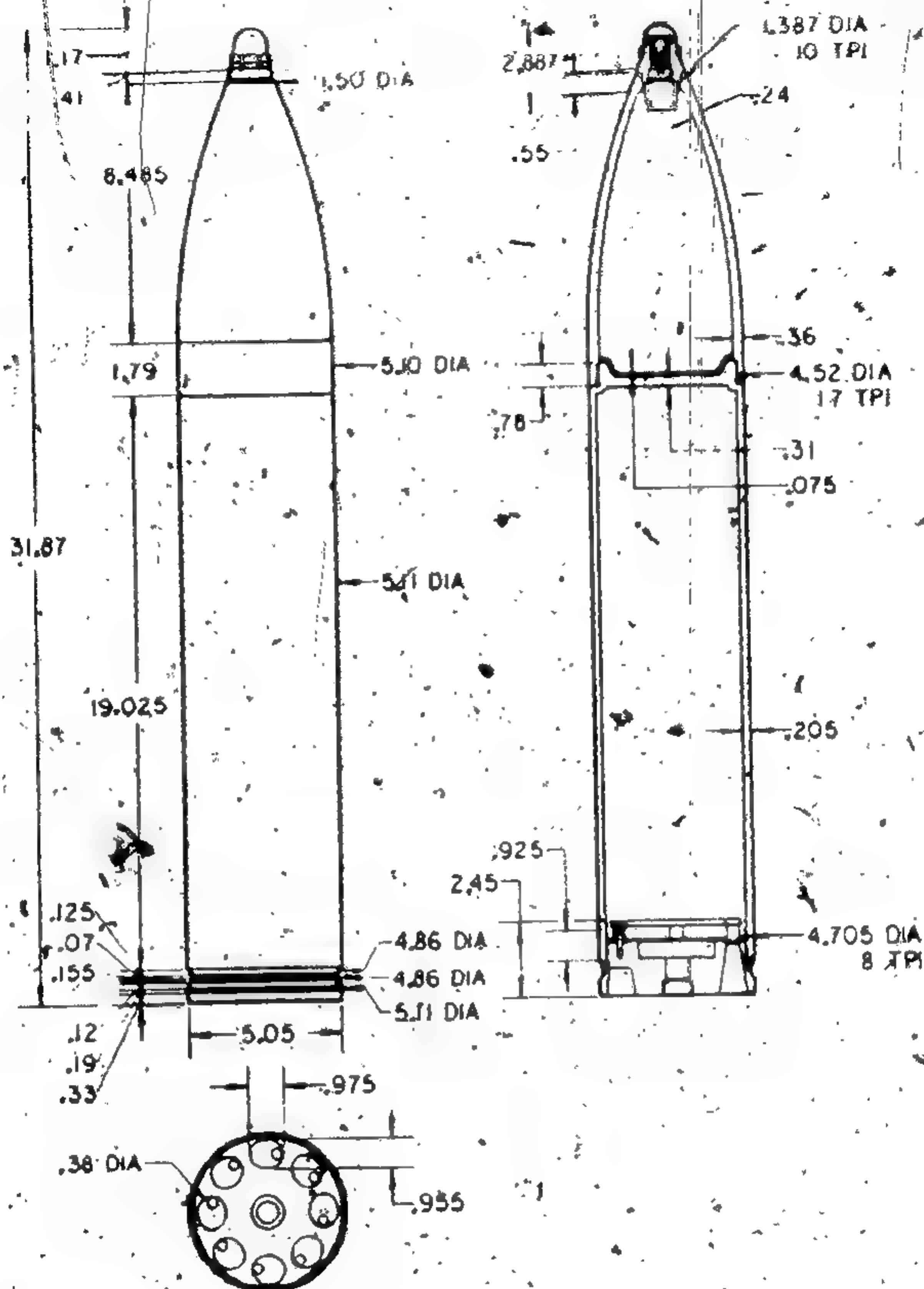


Fig. 502954

ALL DIMENSIONS IN INCHES

Caliber	130 mm	Bursting charge	5.14 lb TNT
Identification	RP-2	Fuze	Model NZ60V
Type	HE		point
Weight (fuzed)	53.34 lb		detonating
	Known using		
	weapon		Rocket launcher
			Model 51

Figure 144. Czechoslovak 130-mm HE projectile Model RP-2.

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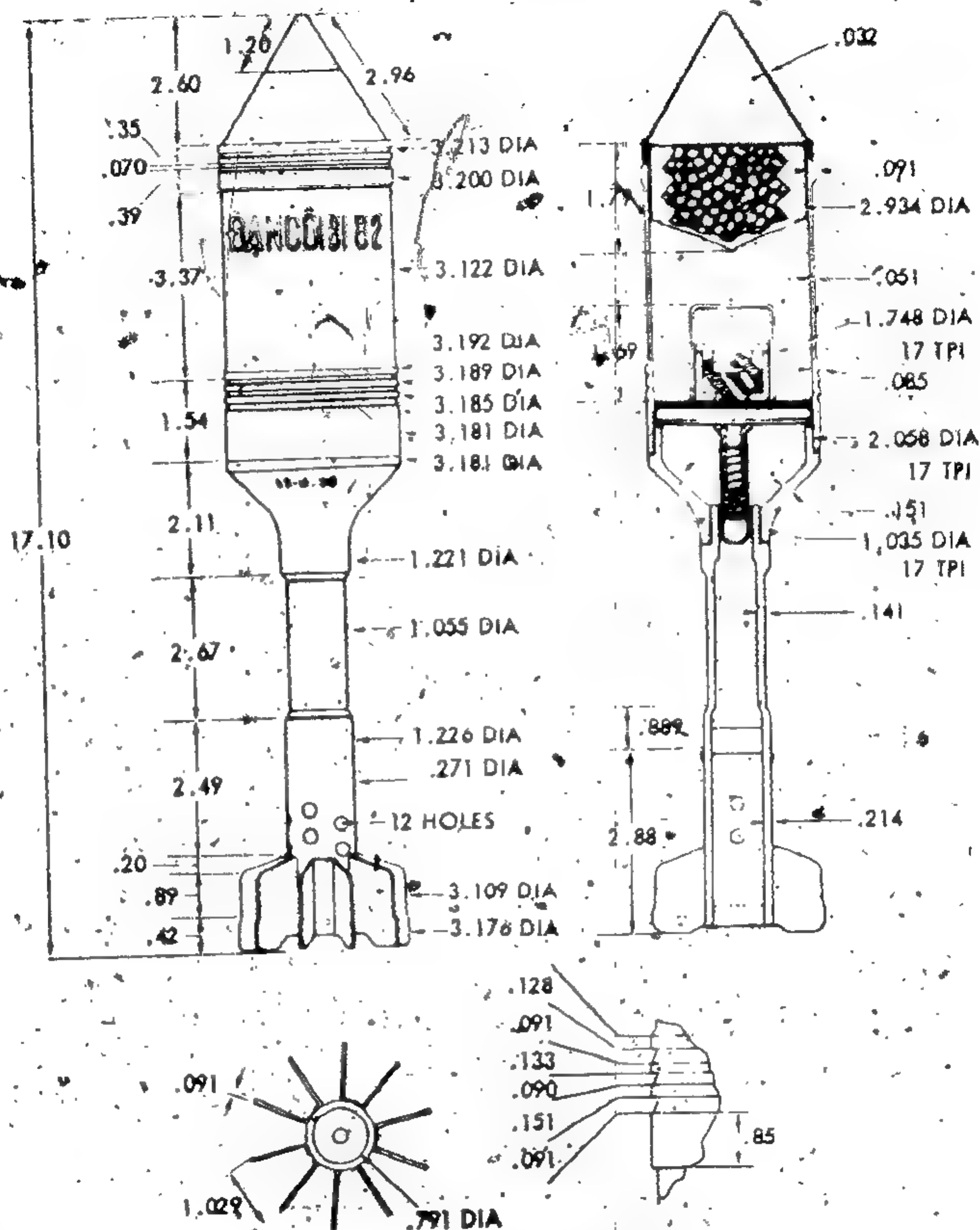


Fig. 502955

ALL DIMENSIONS IN INCHES

Caliber	82 mm	Fuze	Type II time-base
Identification	B1	Known using	
Type	HE	weapons	Mortars Types 20 and 53
Weight (fuzed)	7.12 lb	Remarks	Projectile will also fit Soviet M1937 mortar.
Bursting charge	1.32 lb TNT		Projectile payload is 240 steel fragments.

Figure 144a. North Vietnamese 82-mm HE projectile Model B1.

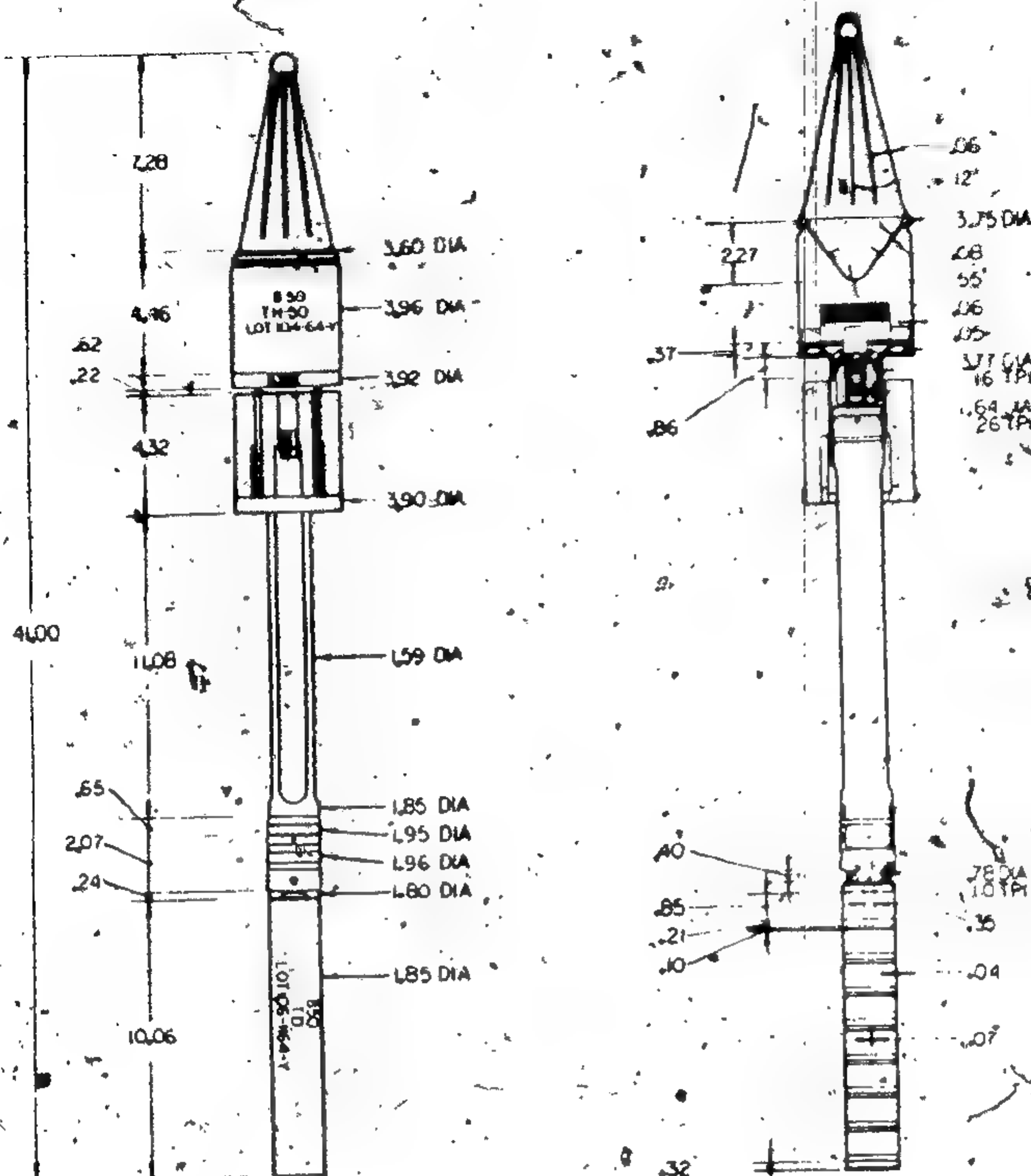
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Original



Neg. 502956

ALL DIMENSIONS IN INCHES

Caliber	50/100 mm	Fuze	Model (?) base detonating
Identification	B-50	Known using	
Type	HEAT	weapon	Antitank grenade launcher
Weight (fuzed)	8.97 lb		Model B-50
Bursting charge	1.98 lb RDX/TNT	Remarks	Projectile warhead is 100 mm in diameter. Bore of launcher is 50 mm.

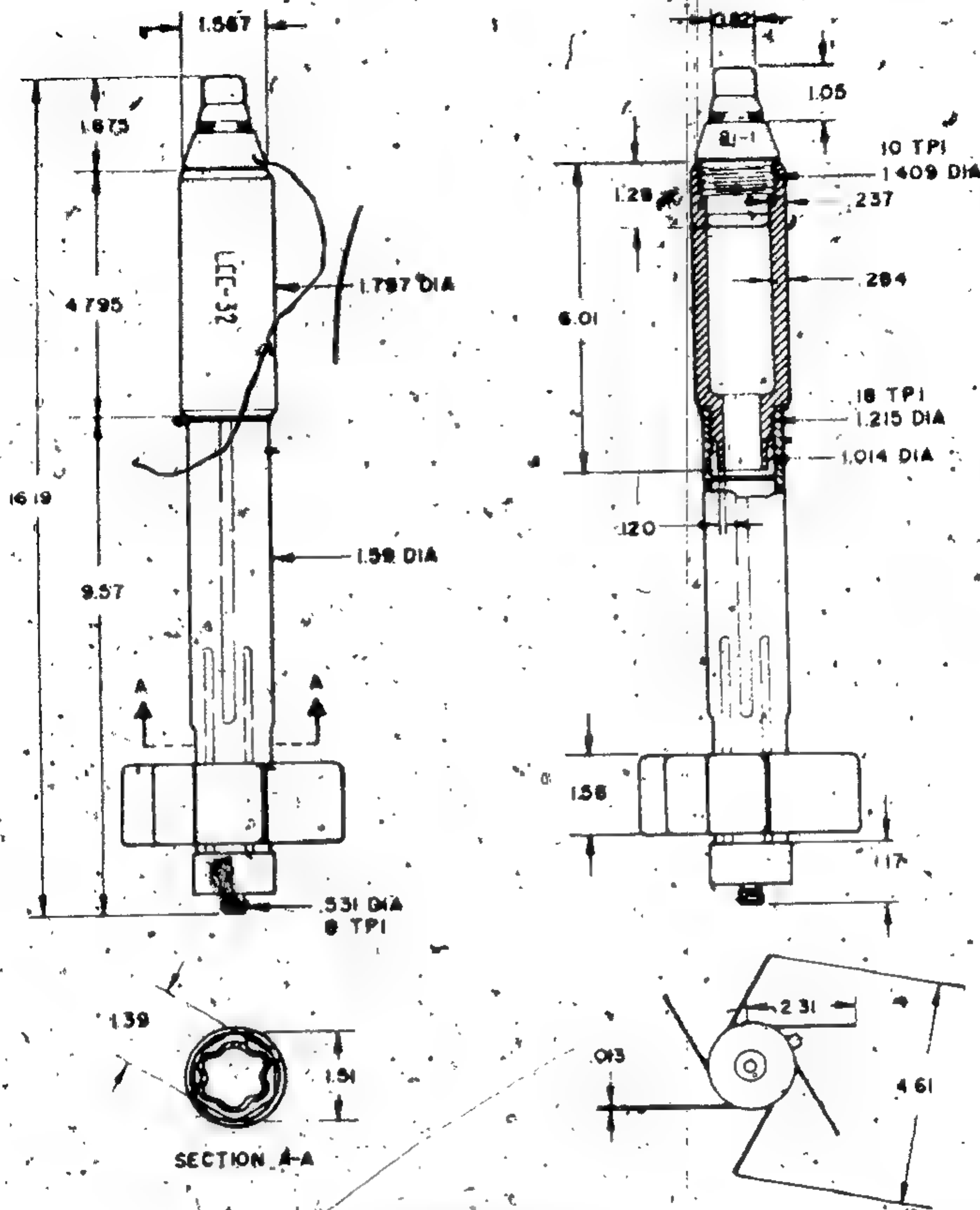
Figure 145. North Vietnamese 50/100 mm HEAT projectile Model B-50.

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Neg. 502957

ALL DIMENSIONS IN INCHES

Caliber	40/45 mm	Fuze	Model M1 point detonating
Identification	LCC-32	Known using	Antitank grenade launcher RPG-2
Type	HE	Remarks	Fuze is copy of Soviet M1 Mortar fuze.
Weight (fuzed)	3.90 lb.		
Bursting charge	0.23 lb TNT/ dinitronaphthalene		

Figure 145a. North Korean 40/45-mm HE projectile Model LCC-32.

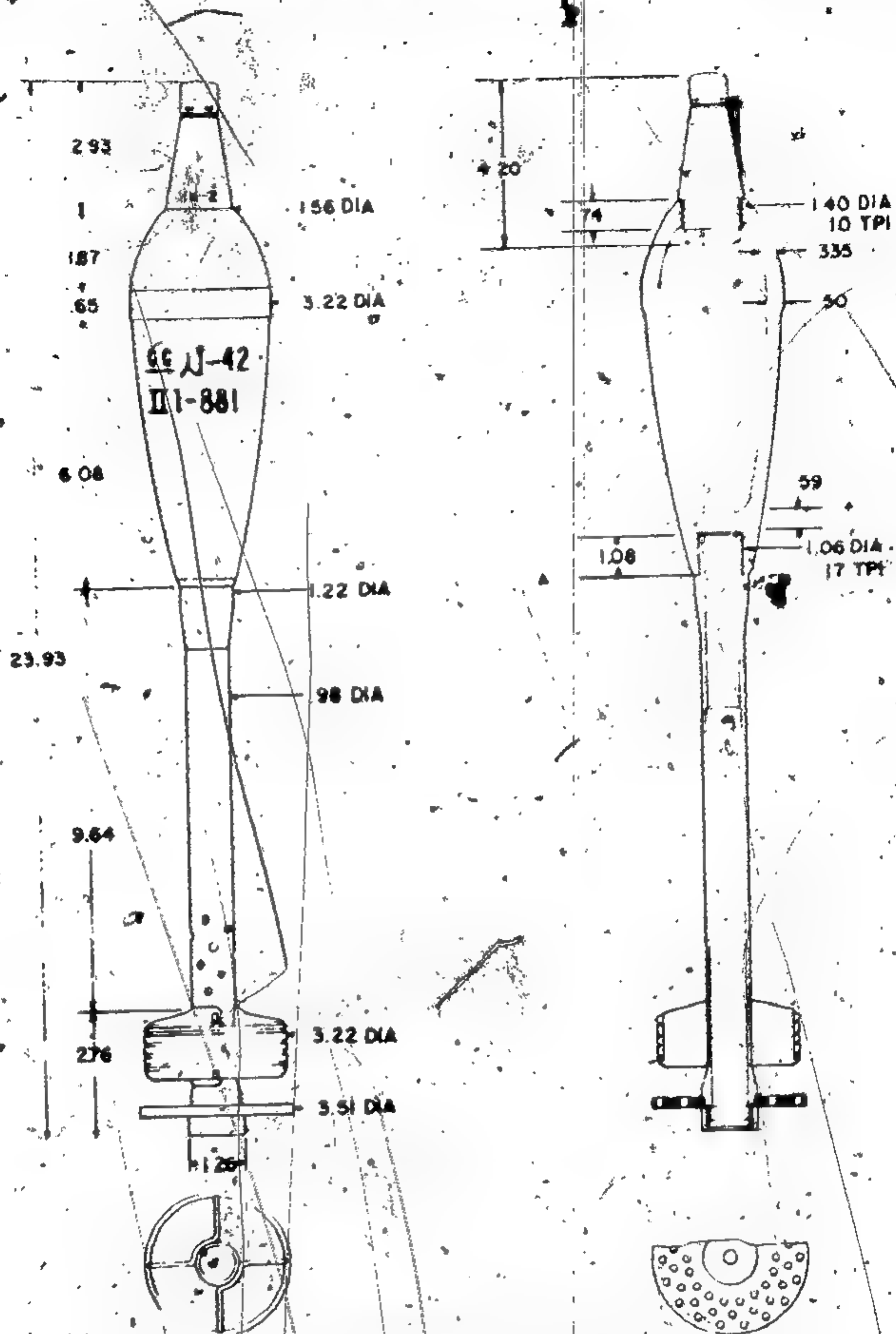
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Original



Neg. 502958

ALL DIMENSIONS IN INCHES

Caliber ----- 82 mm  
 Identification ----- 0-881  
 Type ----- Frag  
 Weight (fuzed) ----- 8.93 lb  
 Bursting charge ----- 1.03 lb  
 TNT/  
 dinitronapthalene

Fuze ----- Model GK-2 point  
 initiating  
 Known using  
 weapon ----- Soviet Recoilless  
 Gun B-10  
 Remarks ----- Projectile is a copy  
 of the Soviet Model  
 0-881.

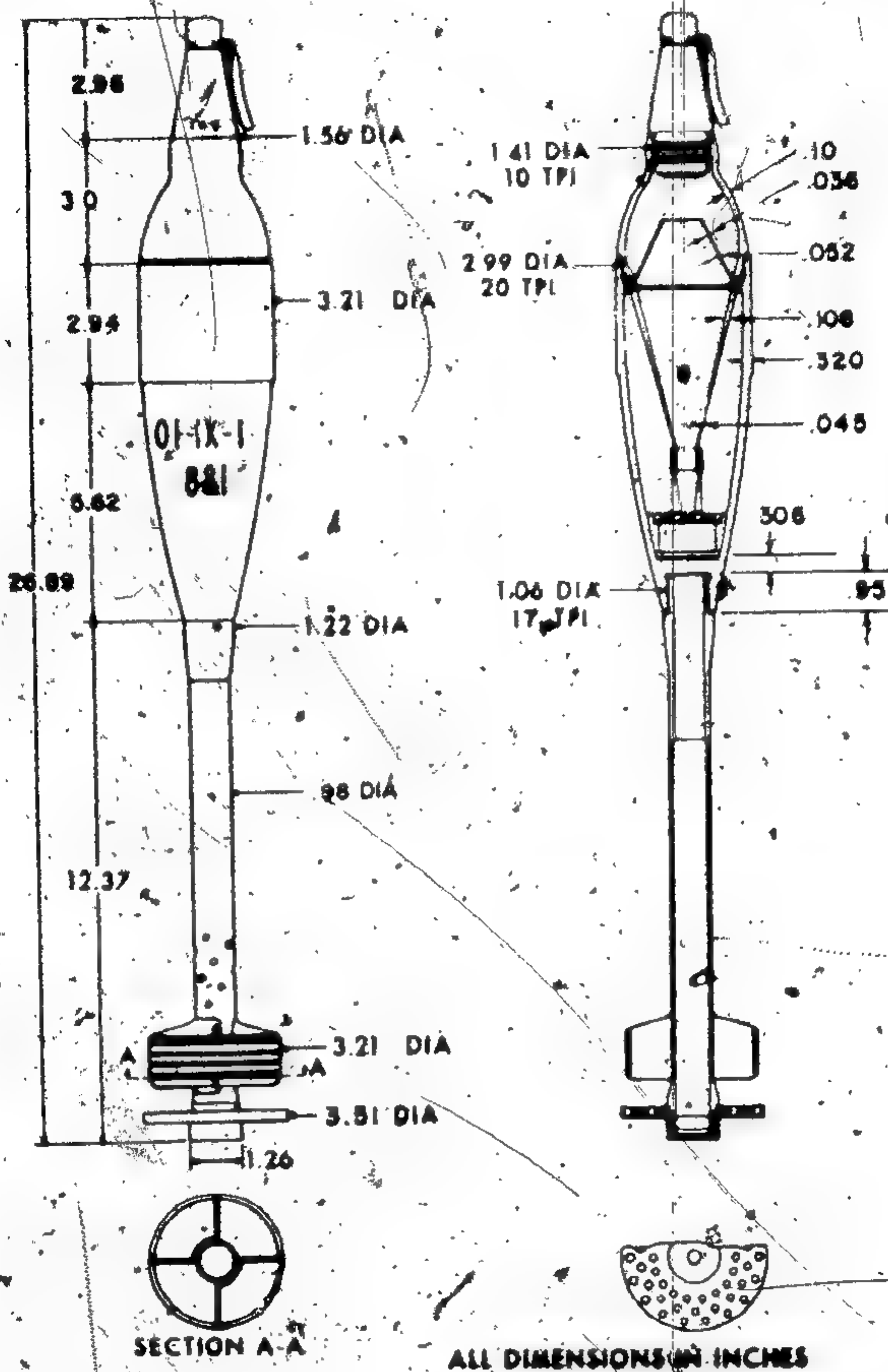
Figure 146. North Korean 82-mm frag projectile Model 0-881.

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Original

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Neg. 502959

Caliber ----- 82 mm  
 Identification ----- BK-881  
 Type ----- HEAT  
 Weight (fuzed) ----- 8.57 lb  
 Bursting charge ----- 1.19 lb  
 RDX/wax

Fuze ----- Model GK-2  
 point initiating  
 base detonating  
 Known using  
 weapon ----- Soviet recoilless  
 gun B-10  
 Remarks ----- Projectile is a  
 copy of the  
 Soviet Model  
 BK-881

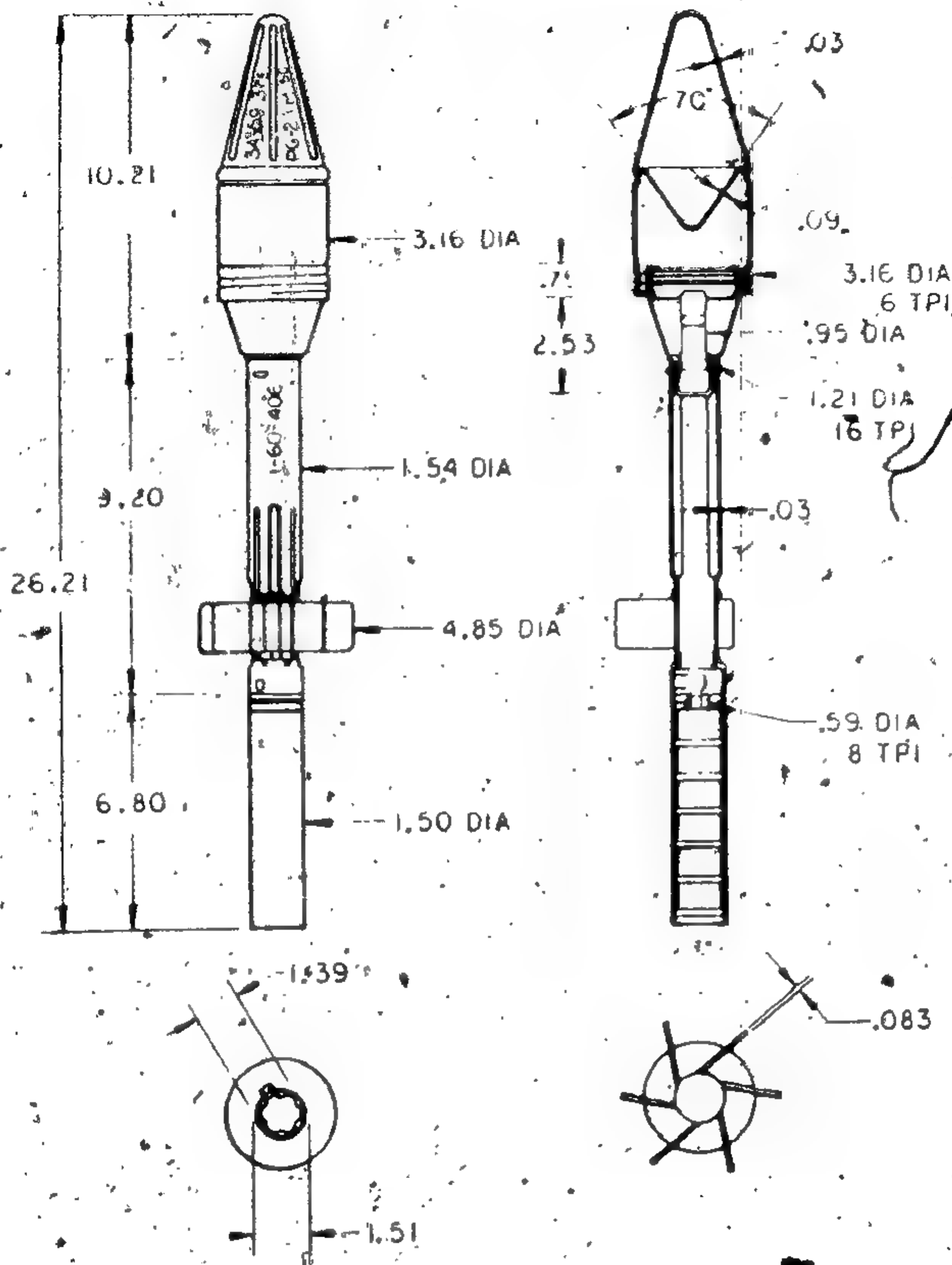
Figure 147. North Korean 82-mm HEAT projectile Model BK-881.



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Original



Neg. 502960

ALL DIMENSIONS IN INCHES

Caliber	40/80 mm	Known using	
Identification	PG-2	weapon	Antitank grenade launcher Model RPG-2
Type	HEAT		
Weight (fuzed)	3.46 lb		
Bursting charge	1.03 lb RDX/TNT	Remarks	Although the launcher has a 40-mm bore, the projectile head has an 80-mm diameter. Using weapon is of Soviet origin. Projectile is a copy of Soviet Model PG-2.
Fuze	Model DK-2 base detonating		

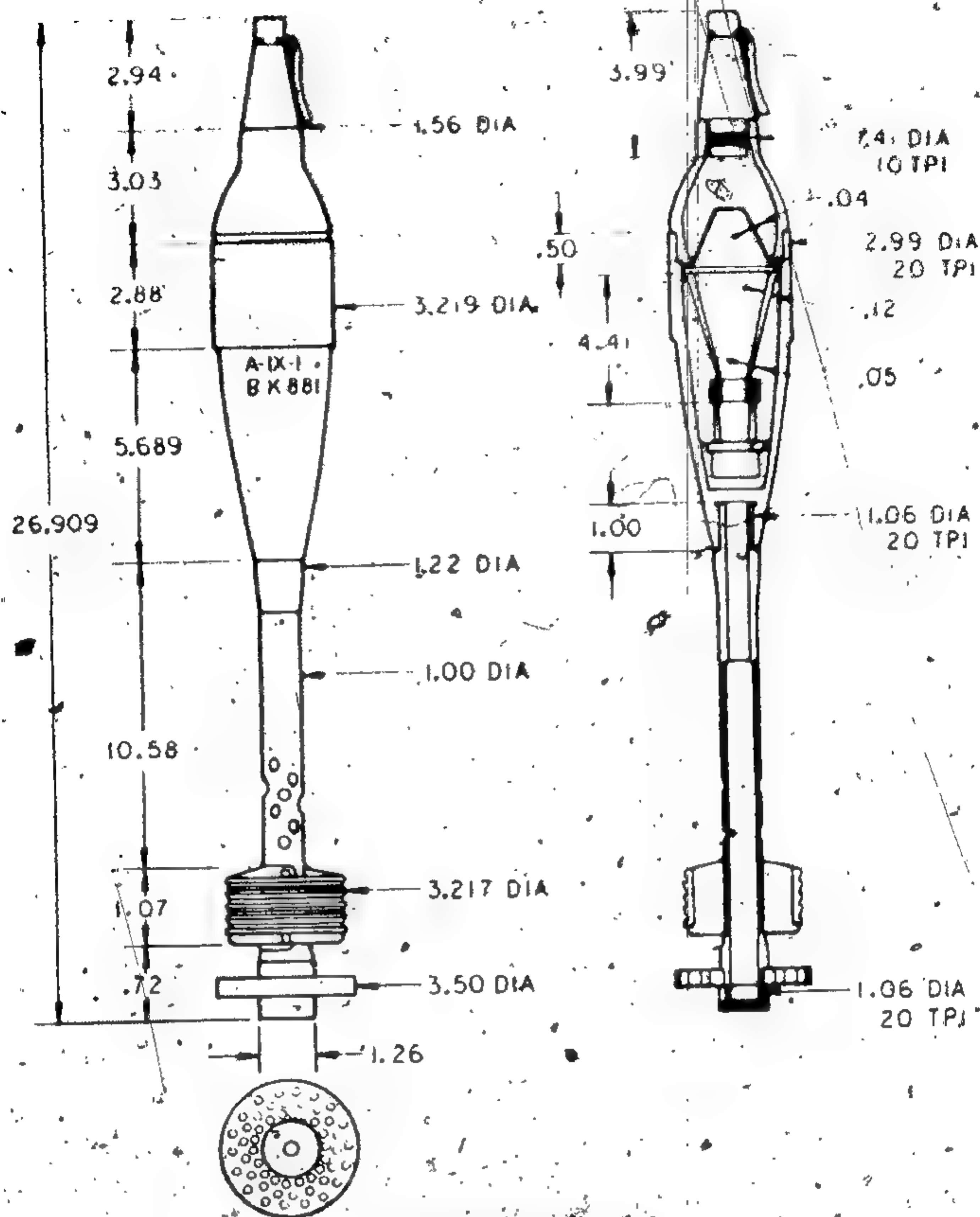
Figure 148. Polish 40/80-mm HEAT projectile Model PG-2.

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Neg. 502961

ALL DIMENSIONS IN INCHES

Caliber	82 mm	Fuze	Model GK-2 PIBD
Identification	BK-881	Known using	
Type	HEAT	weapon	Recoilless gun B-10
Weight (fuzed)	8.53 lb	Remarks	Using weapon is of
Bursting charge	1.02 lb		Soviet origin. Pro-
	RDX		jectile is a copy of
			Soviet Model BK-881.

Figure 149. Polish 82-mm HEAT projectile Model BK-881.

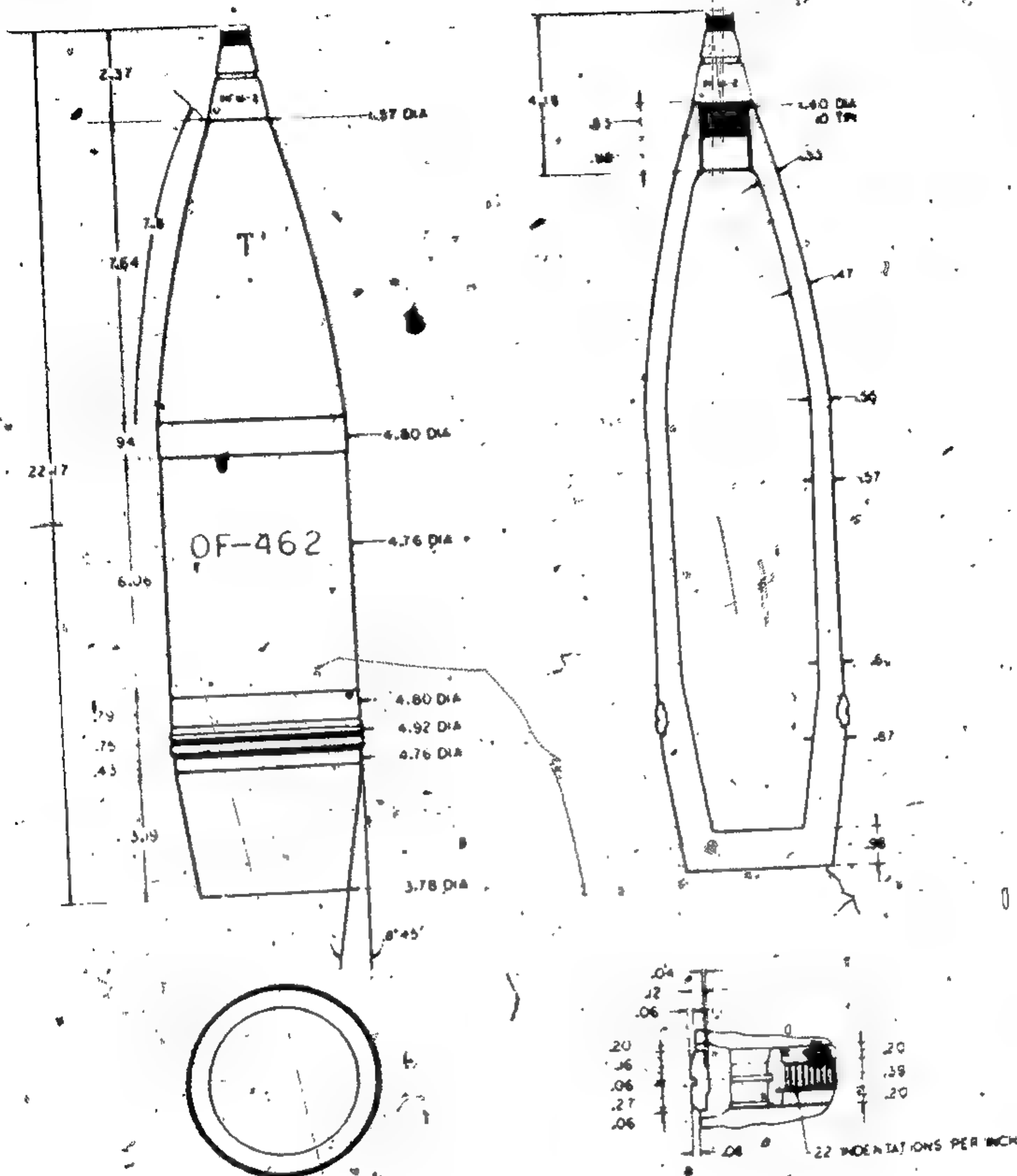
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Neg. 502962

ALL DIMENSIONS IN INCHES

Caliber ----- 122 mm  
 Identification ----- OF-462  
 Type ----- Frag-HE  
 Weight (fuzed) ----- 46.97 lb  
 Bursting charge ----- 7.41 lb TNT

Fuze ----- Model RGM-2 point  
 detonating  
 Known using -----  
 weapons ----- Howitzers M1910/30,  
 M1938 (M-30), and  
 D-30 and field guns  
 M1931 and M1931/37  
 (A-19)

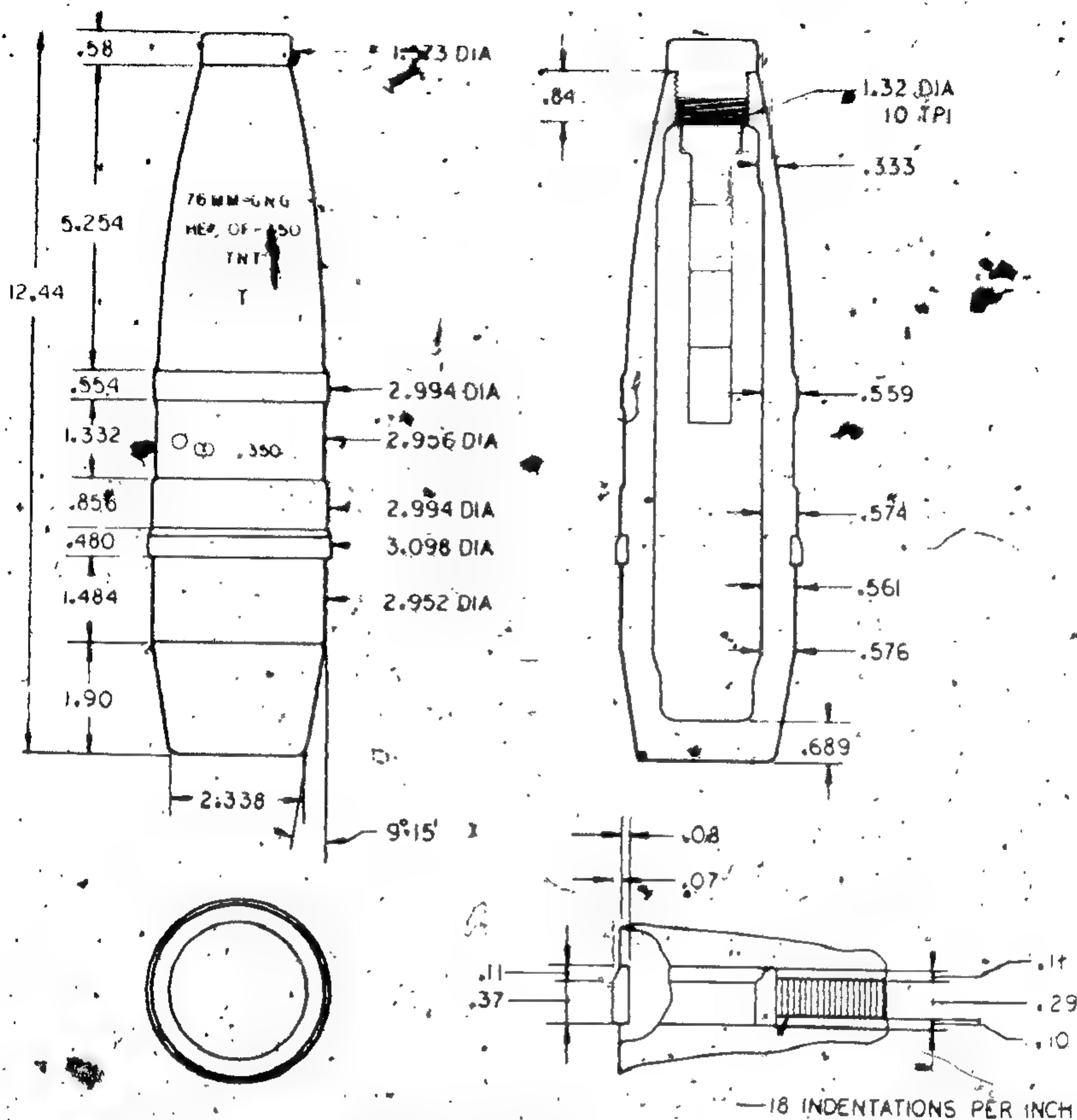
Figure 150. Polish 122-mm frag-HE projectile Model OF-462.

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Neg. 502963

ALL DIMENSIONS IN INCHES

Caliber	76 mm	Bursting charge	1.57 lb TNT
Identification	OF-350	Fuze	Model KTM-1
Type	HE		point
Weight (fuzed)	13.67 lb		detonating
Known using			
weapon			Howitzer
			M1948(B-1)
Remarks			Illustrated
			without fuze

Figure 151. Yugoslav 76-mm HE projectile Model OF-350.

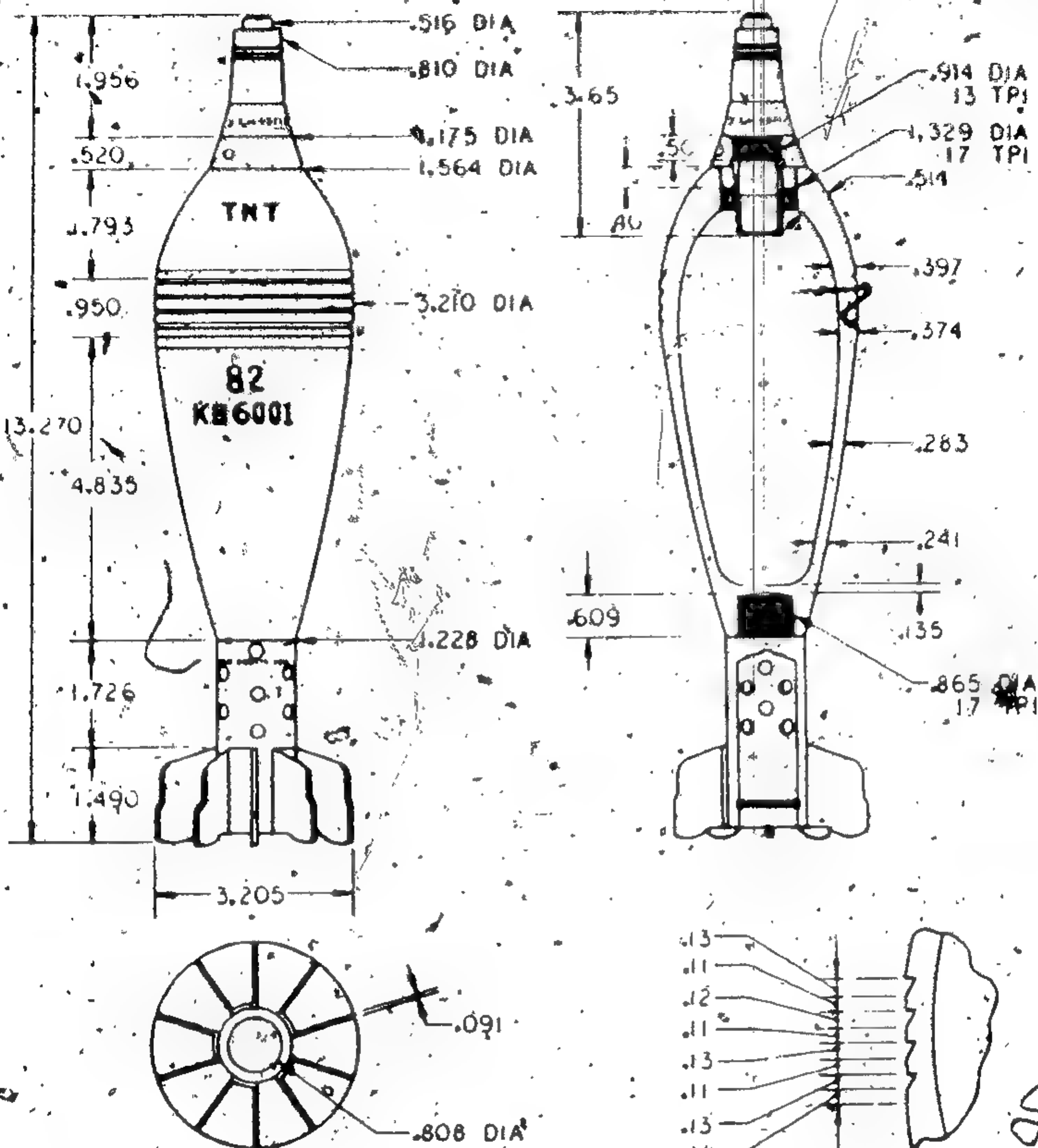
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Original



Neg. 502964

ALL DIMENSIONS IN INCHES

Caliber ----- 82 mm

Identification ----- 31

Type ----- HE

Weight (fuzed) ----- 7.29 lb

Bursting charge ----- 1.02 lb TNT

Fuze ----- Model UT M45P1

Known using ----- point detonating

weapon ----- Mortar (?)

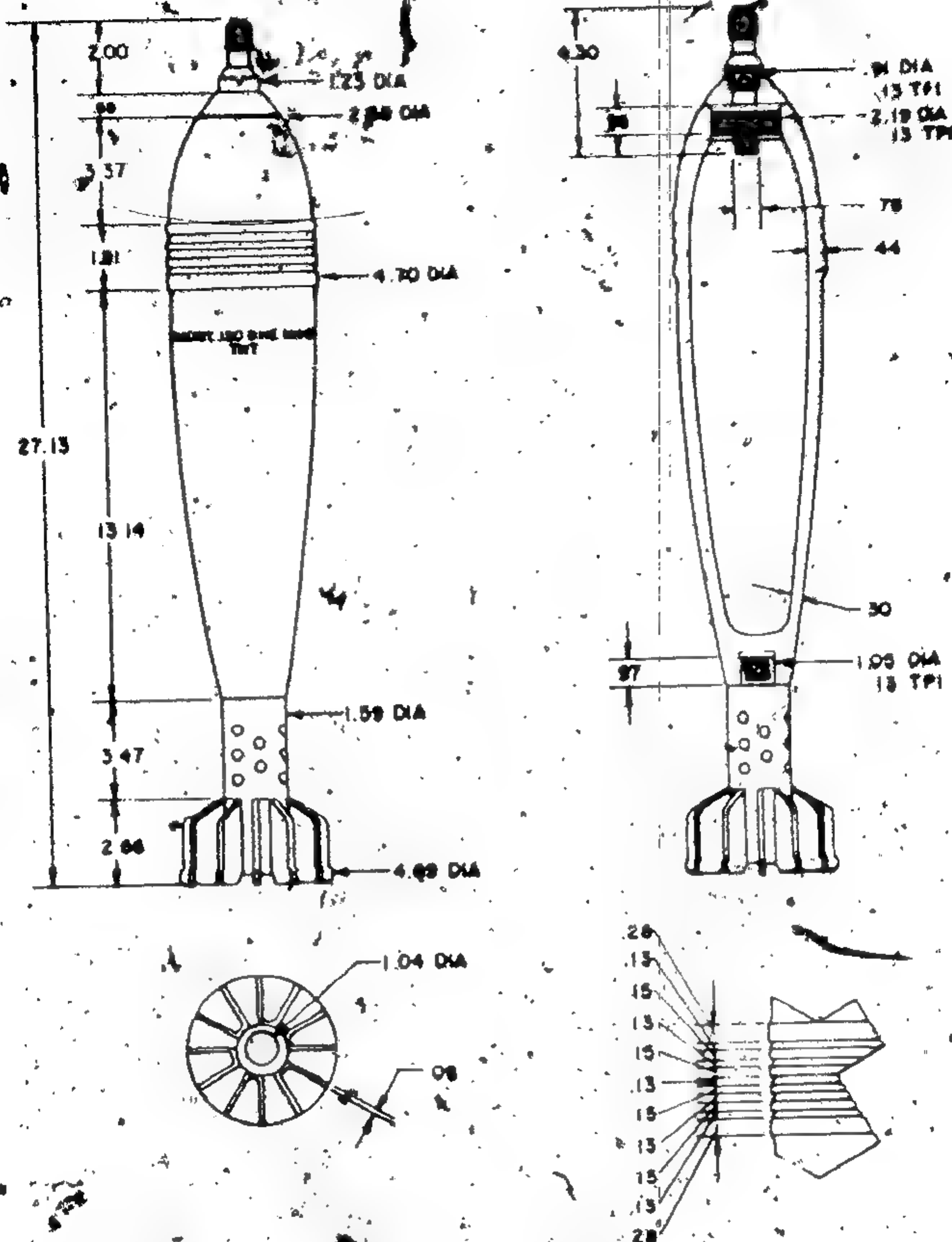
Figure 152. Yugoslav 82-mm HE projectile Model M31.

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Original



Neg. 502965

ALL DIMENSIONS IN INCHES

Caliber	120 mm	Fuze	Model 45TU point detonating
Identification	49		
Type	HE	Known using	
Weight (fuzed)	35.05 lb	weapon	Mortar UB M52
Bursting charge	6.83 lb TNT	Remarks	Fuze is modified version of Brandt M1945 mortar fuze.

Figure 153. Yugoslav 120-mm HE projectile Model 49.

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Original

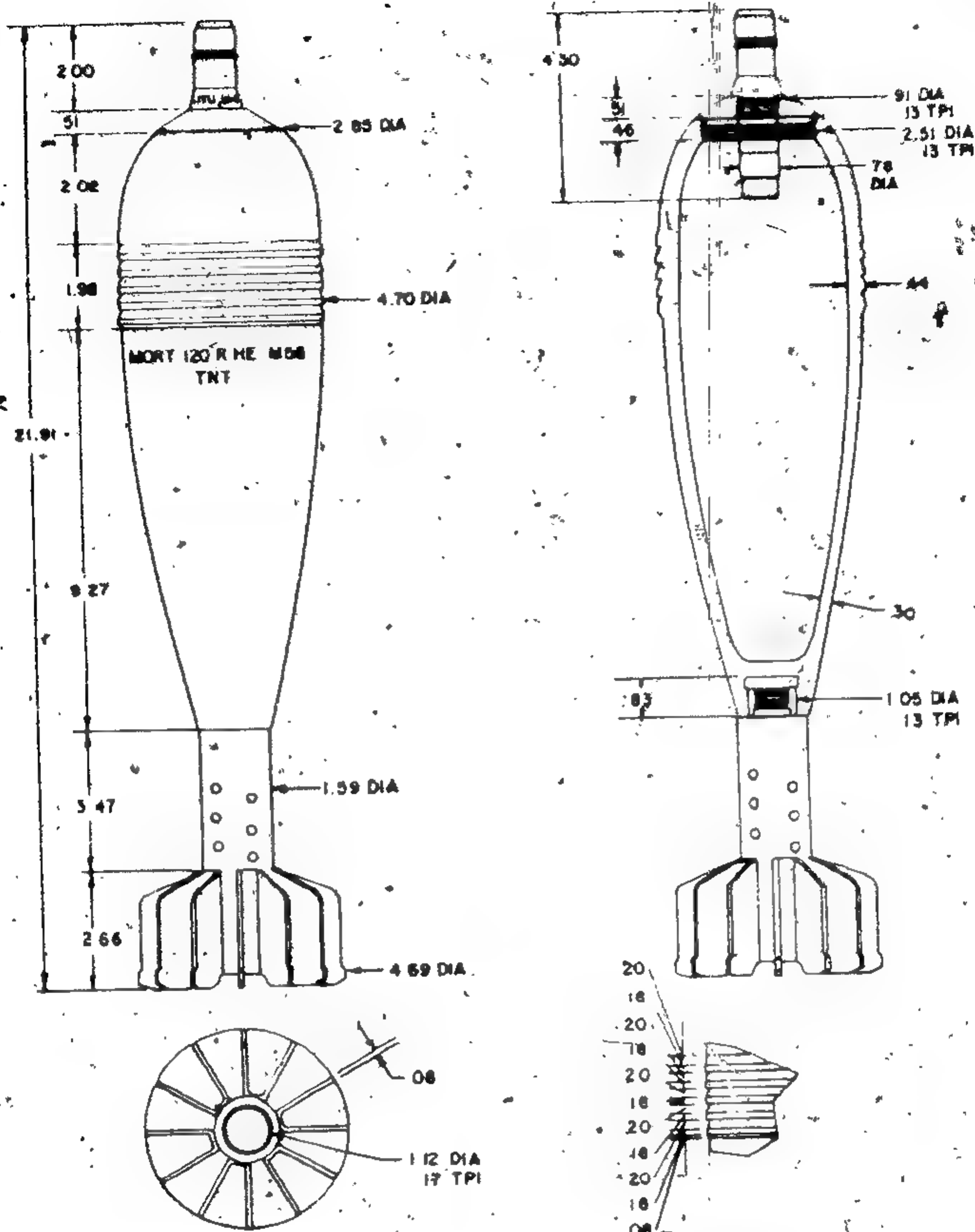


Fig. 502966

ALL DIMENSIONS IN INCHES

Caliber	120 mm	Fuze	Model UTU M45 point detonating
Identification	56	Known using	Mortar UB M52
Type	HE	Remarks	Fuze is copy of the Brandt M1945 mortar fuze.
Weight (fuzed)	26.90 lb		
Bursting charge	5.51 lb TNT		

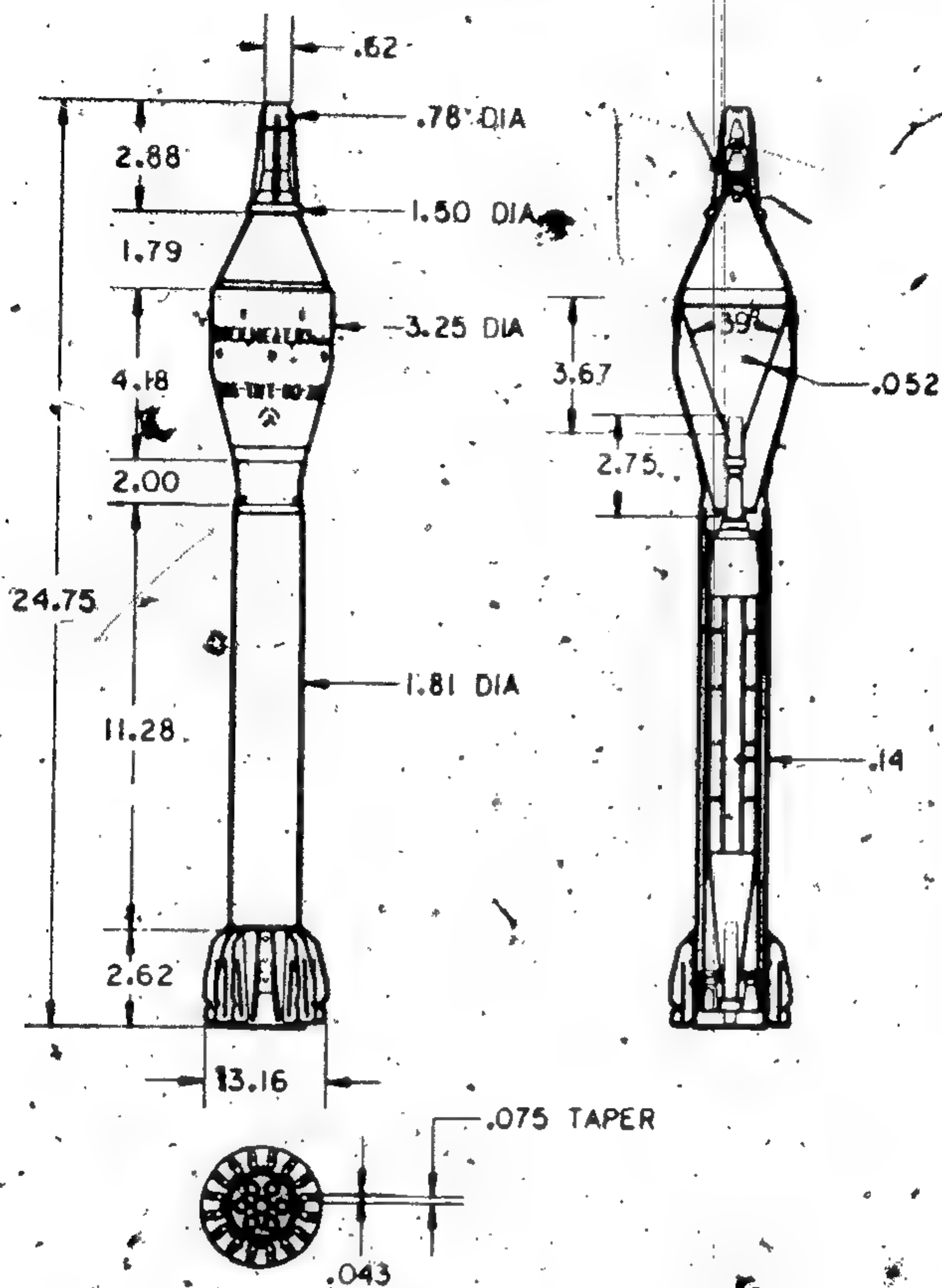
Figure 154. Yugoslav 120-mm HE projectile Model 56.

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Original

ST-CW-07-29-74



Neg. 502967

ALL DIMENSIONS IN INCHES

Caliber	83 mm	Bursting charge	1.03 lb RDX/TNT
Identification	(?)	Fuze	Model (?) PIBD
Type	HEAT	Known using	
Weight (fuzed)	3.50 lb	weapon	Antitank rocket launcher Model 1951

Figure 155. Belgian 83-mm HEAT projectile Model (?).

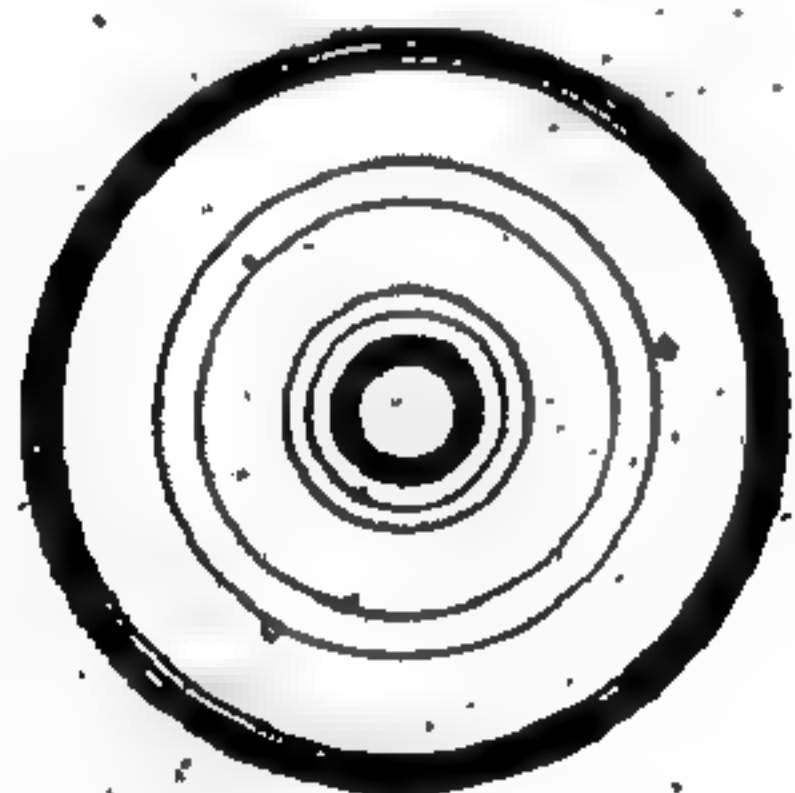
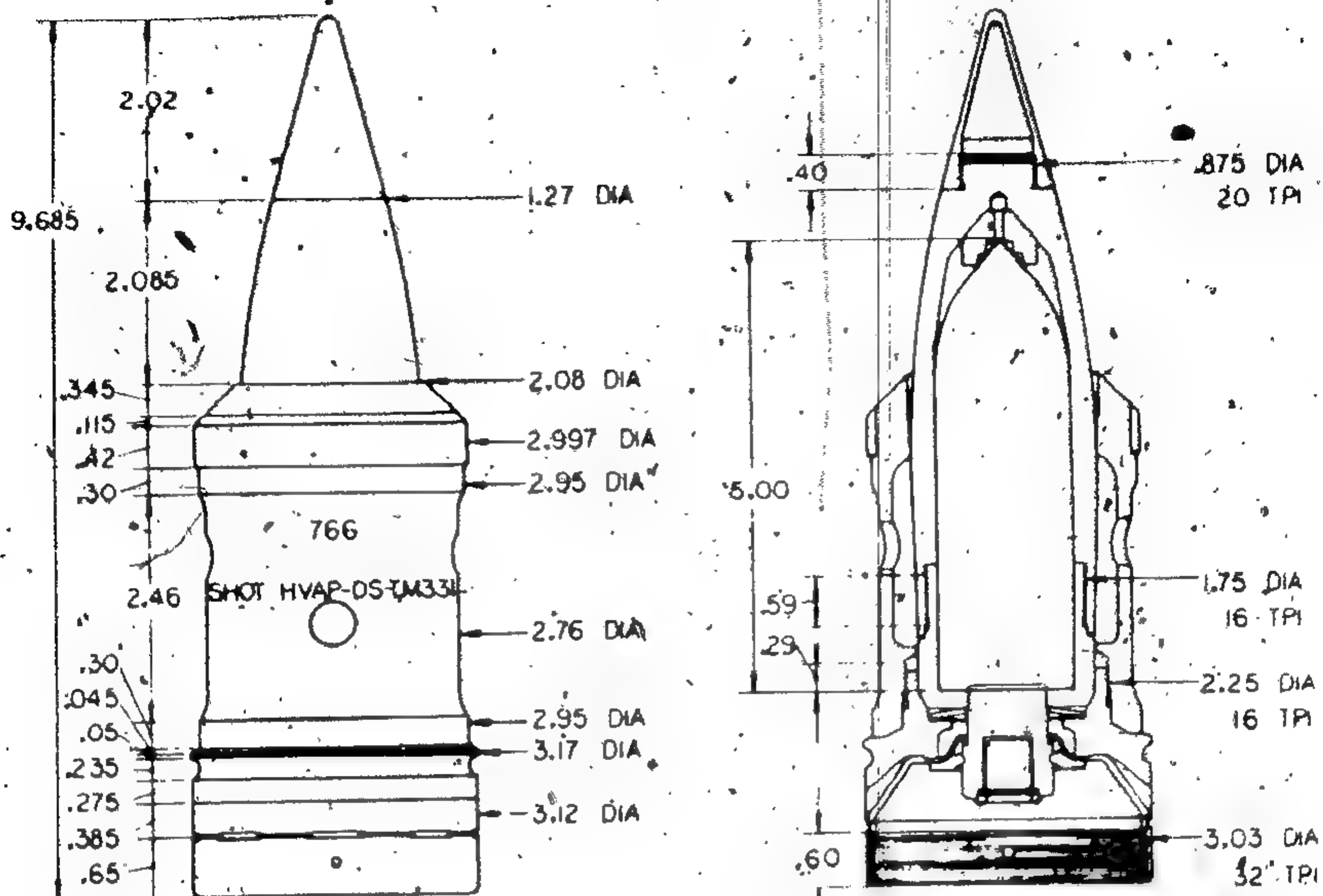
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Original



Neg. 502968.

ALL DIMENSIONS IN INCHES

Caliber	76 mm	Known using	
Identification	M331	weapon	Tank gun M-32.
Type	HVAPDS-T	Remarks	Using weapon is
Weight	8.22 lb		of US origin.

Figure 156. Canadian 76-mm HVAPDS-T projectile Model M331.

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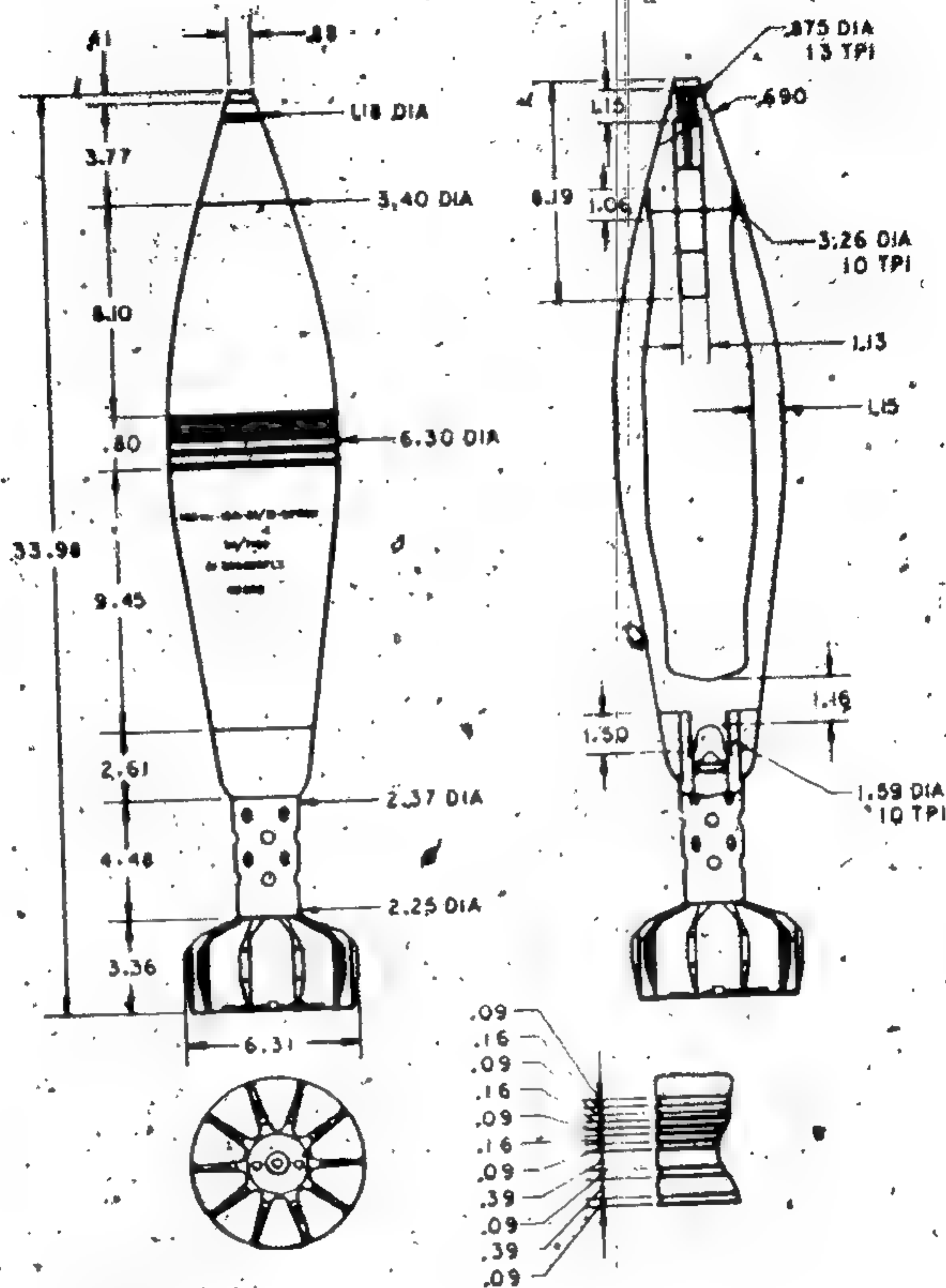


Fig. 502969

ALL DIMENSIONS IN INCHES

Caliber	160 mm	Bursting charge	9.28 lb TNT
Identification	M1955	Fuze	Model SP-52 pint detonating
Type	HE	Known using	
Weight (fuzed)	83.92 lb	weapon	Mortar M1953

Figure 157. Finnish 160-mm HE projectile Model M1955.

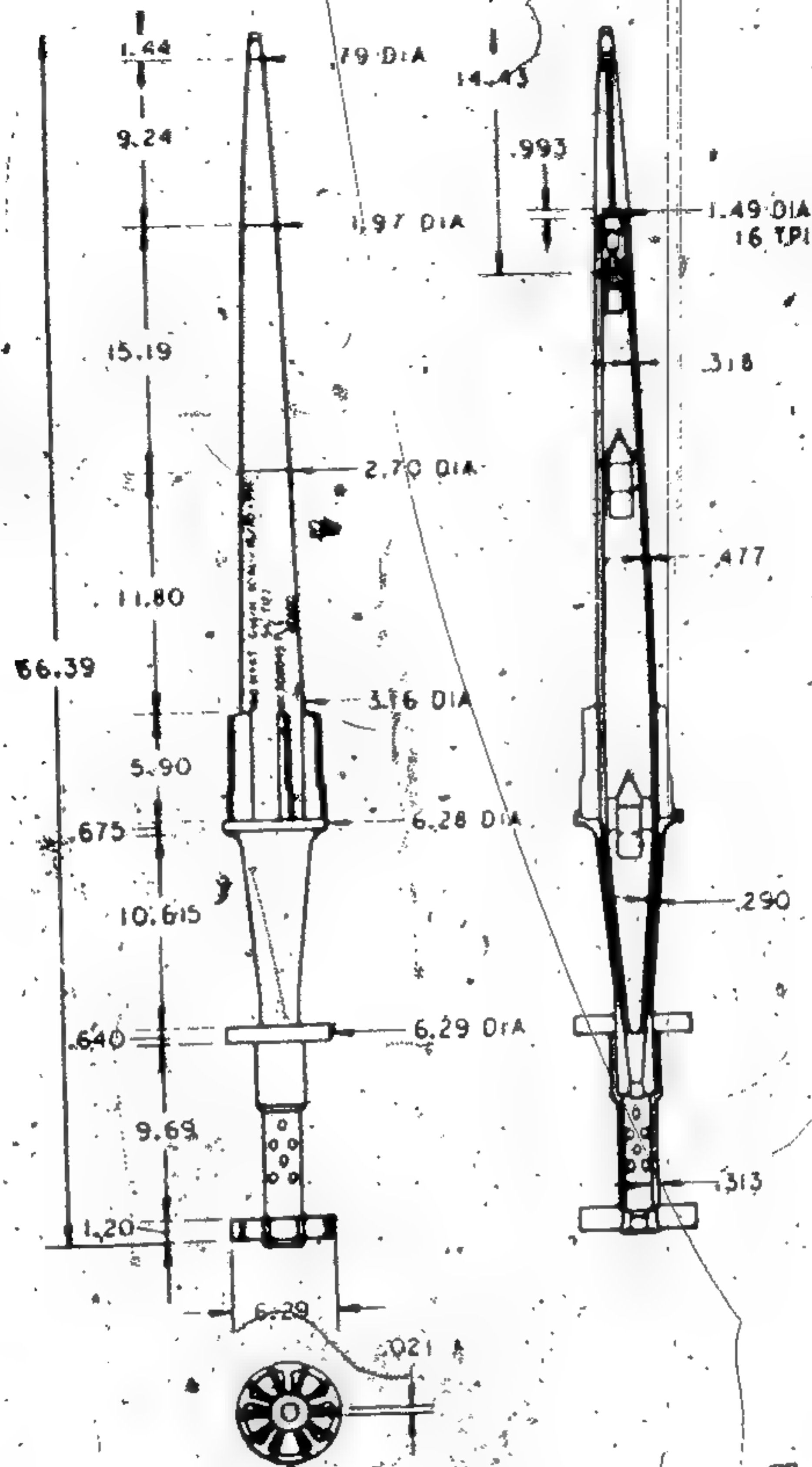
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Original



Neg. 502970

ALL DIMENSIONS IN INCHES

Caliber	160 mm	Bursting charge	4.21 lb TNT
Identification	1/53, 1953	Fuze	Model (?)
Type	HE		point
Weight (fuzed)	67 lb		detonating
		Known using	
		weapon	Mortar M1953

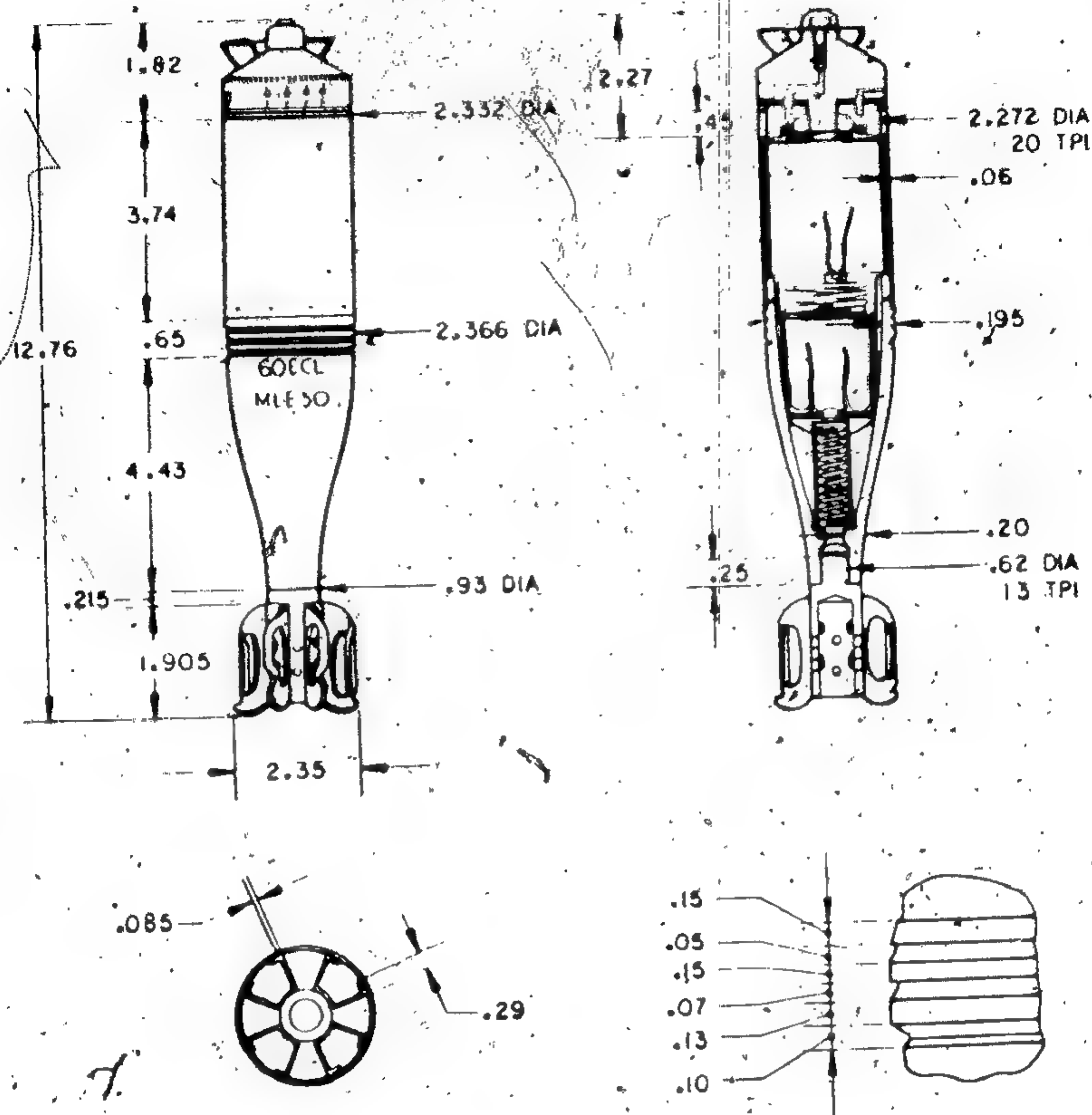
Figure 158. Finnish 160-mm HE projectile Model 1/53, 1953.

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Neg. 502971

ALL DIMENSIONS IN INCHES

Caliber	60 mm	Fuze	Model (?) time
Identification	50	Known using	
Type	Illuminating	weapon	Mortar M1935/44.
Weight (fuzed)	4.13 lb.	Remarks	The illuminating candle assembly weighs 0.88 lb.

Figure 159. French 60-mm illuminating projectile Model 50.

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Original

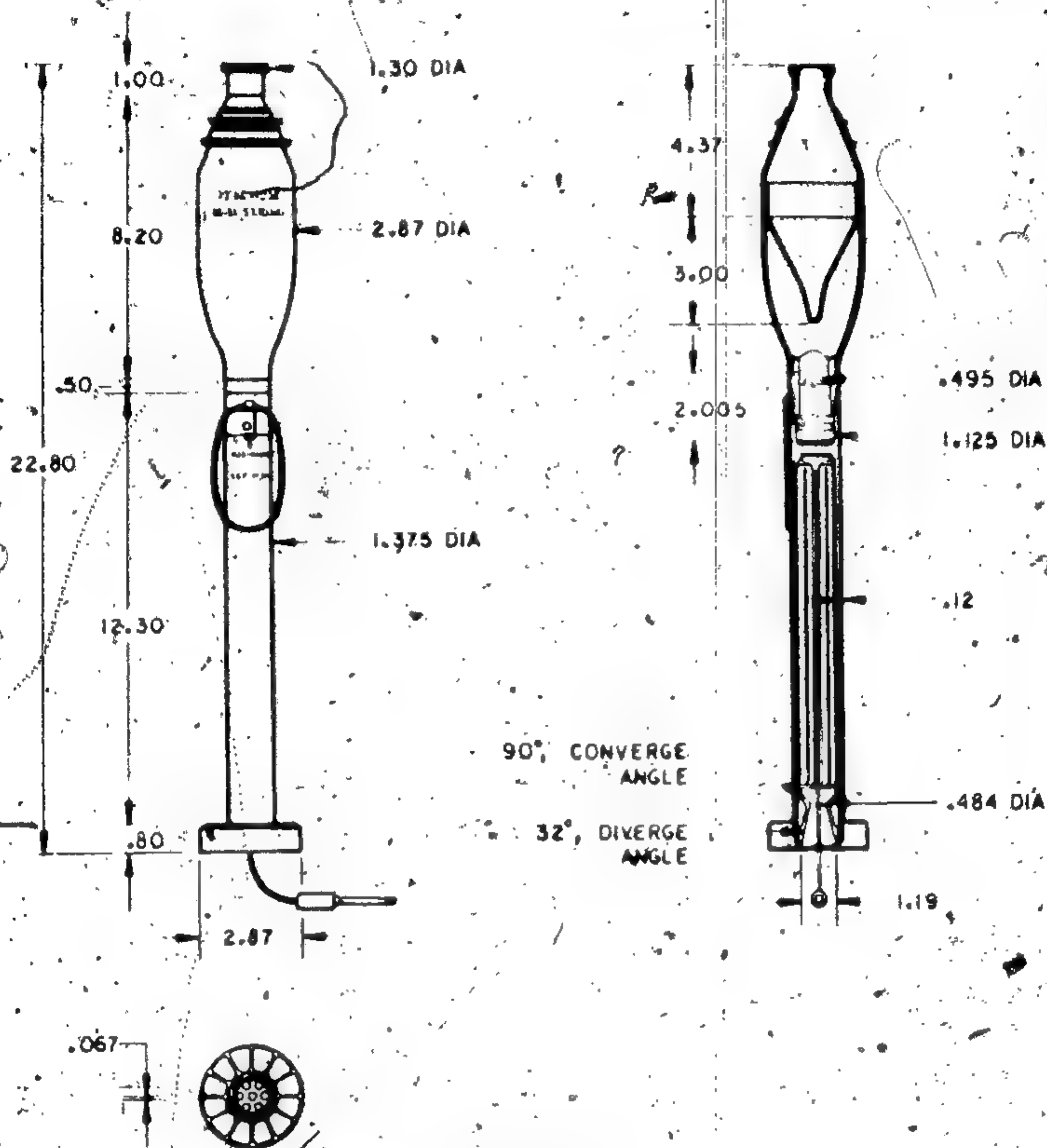


Fig. 502972

ALL DIMENSIONS IN INCHES

Caliber	73 mm	Bursting charge	0.7 lb RDX/TNT
Identification	Model 1950	Fuze	Model (?) base
Type	HEAT		detonating
Weight (fuzed)	3.25 lb	Known using	Rocket launcher
		weapon	Model 1950

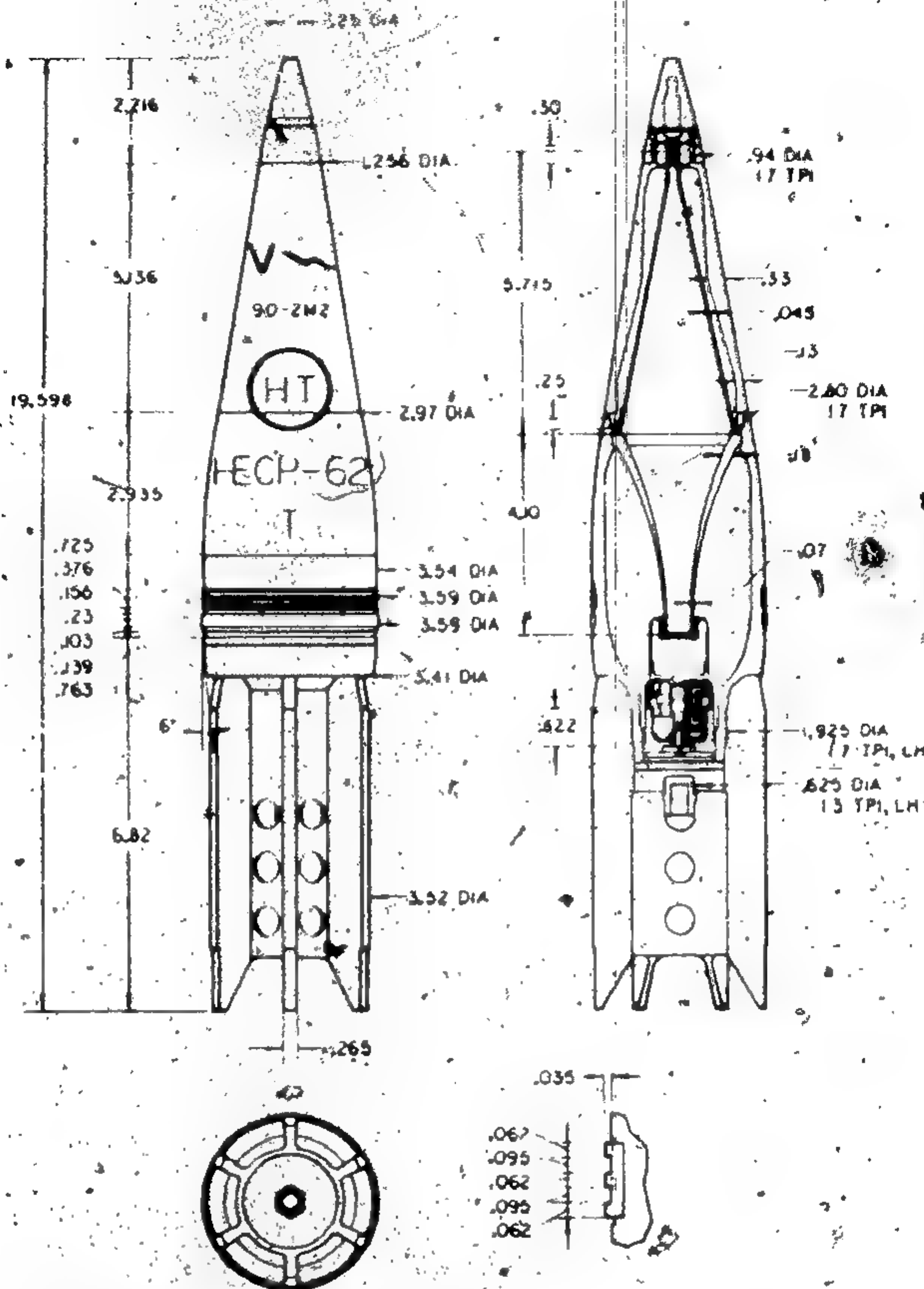
Figure 160. French 73-mm HEAT projectile Model 1950.

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Neg. 502973

ALL DIMENSIONS IN INCHES

Caliber	90 mm	Bursting charge	1.48 lb RDX/TNT
Identification	62	Fuze	Model G3E-A(?) PIBD
Type	HEAT	Known using	
Weight (fuzed)	8.05 lb	weapon	tank gun on Model 1961 ELC (EVEN) light tank

Figure 161. French 90-mm HEAT projectile Model 62.

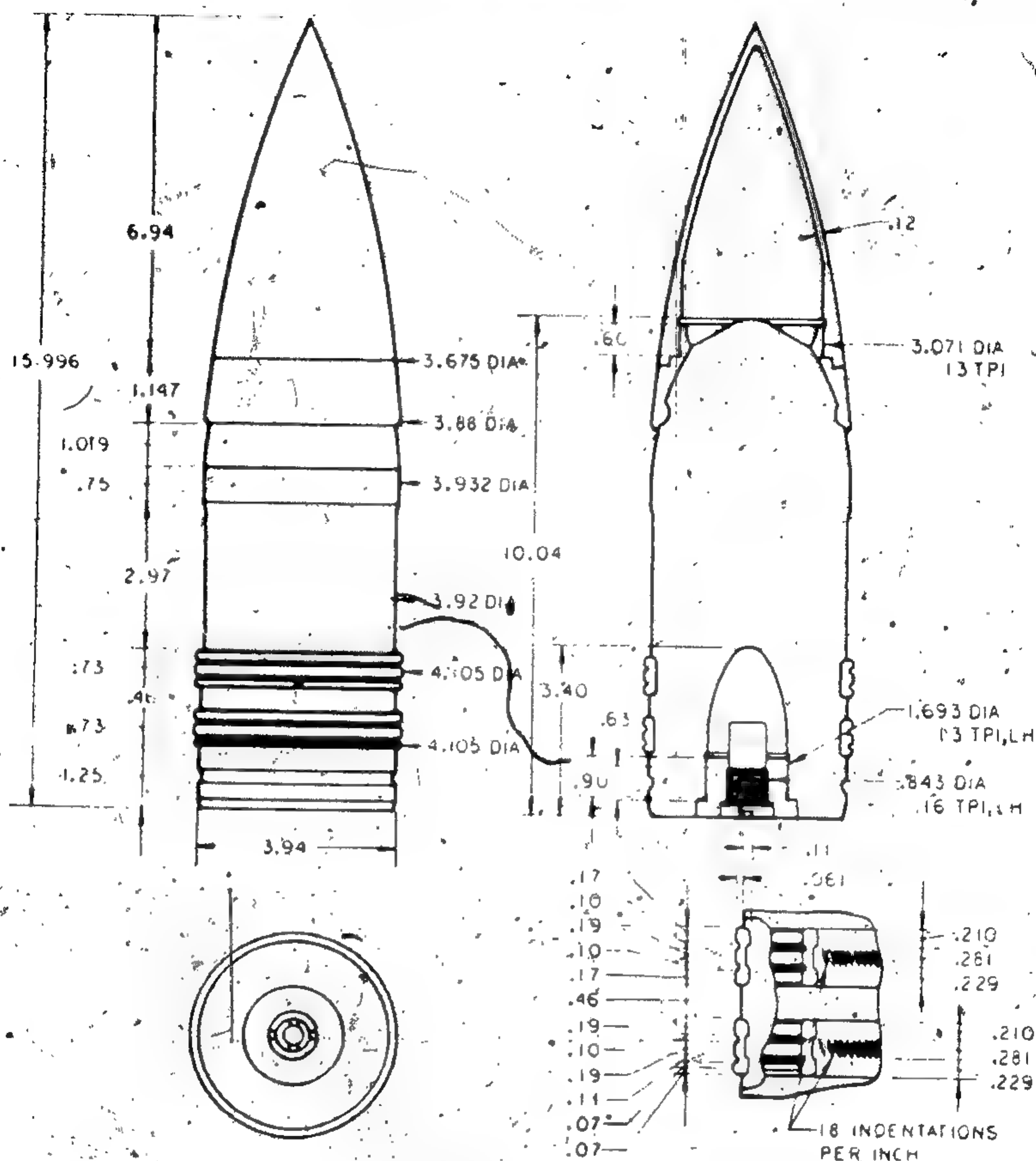
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Original



Neg. 502974

ALL DIMENSIONS IN INCHES

Caliber 100 mm Weight 35.45 lb.  
 Identification (?) Known using  
 Type AP-T weapon (?)

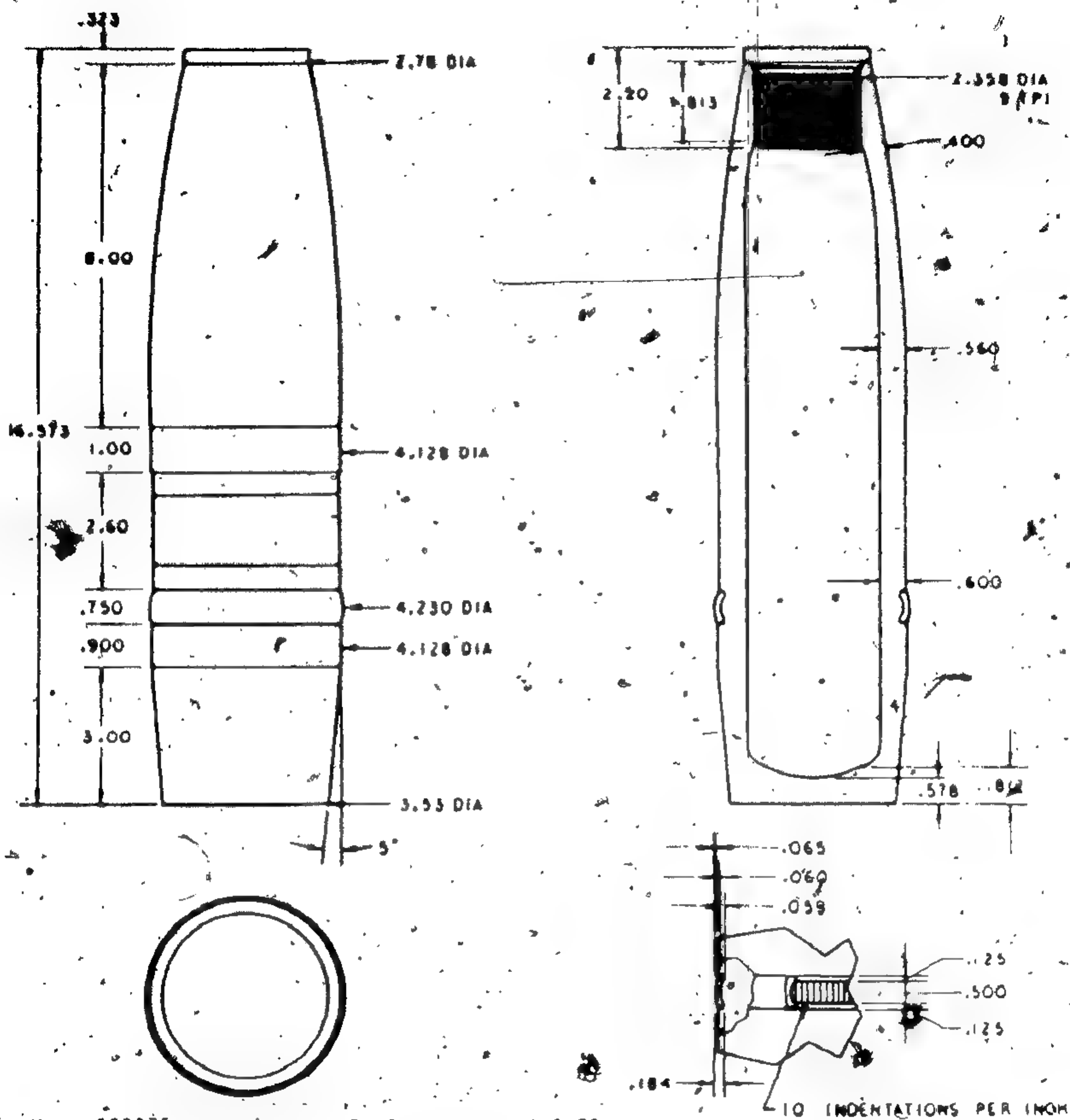
Figure 162. French 100-mm AP-T projectile Model (?).

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Neg. 502975

ALL DIMENSIONS IN INCHES

Caliber	105 mm	Bursting charge	(?)
Identification	(?)	Fuze	Model (?) point detonating
Type	HE	Known using	Howitzer M1950
Weight (fuzed)	35.27 lb	Remarks	Illustrated without fuze.

Figure 163. French 105-mm HE projectile Model (?).

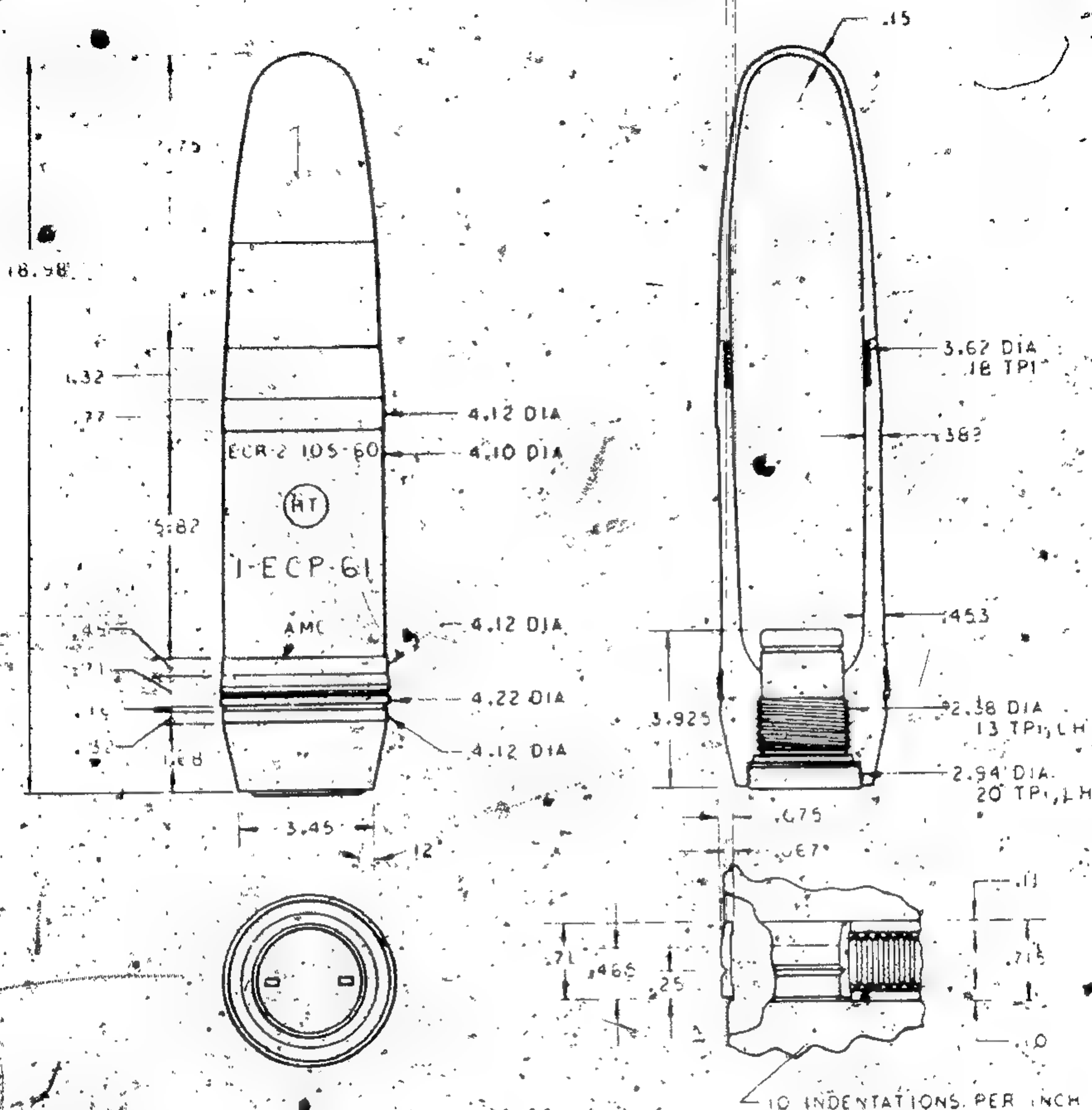
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Neg. 502976

ALL DIMENSIONS IN INCHES

Caliber	105 mm	Bursting charge	6.16 lb RDX/
Identification	(?)		INT
Type	HEP	Fuze	Model (?)
Weight (fuzed)	33.25 lb		base detonating
		Known using	
		weapon	Howitzer M1950

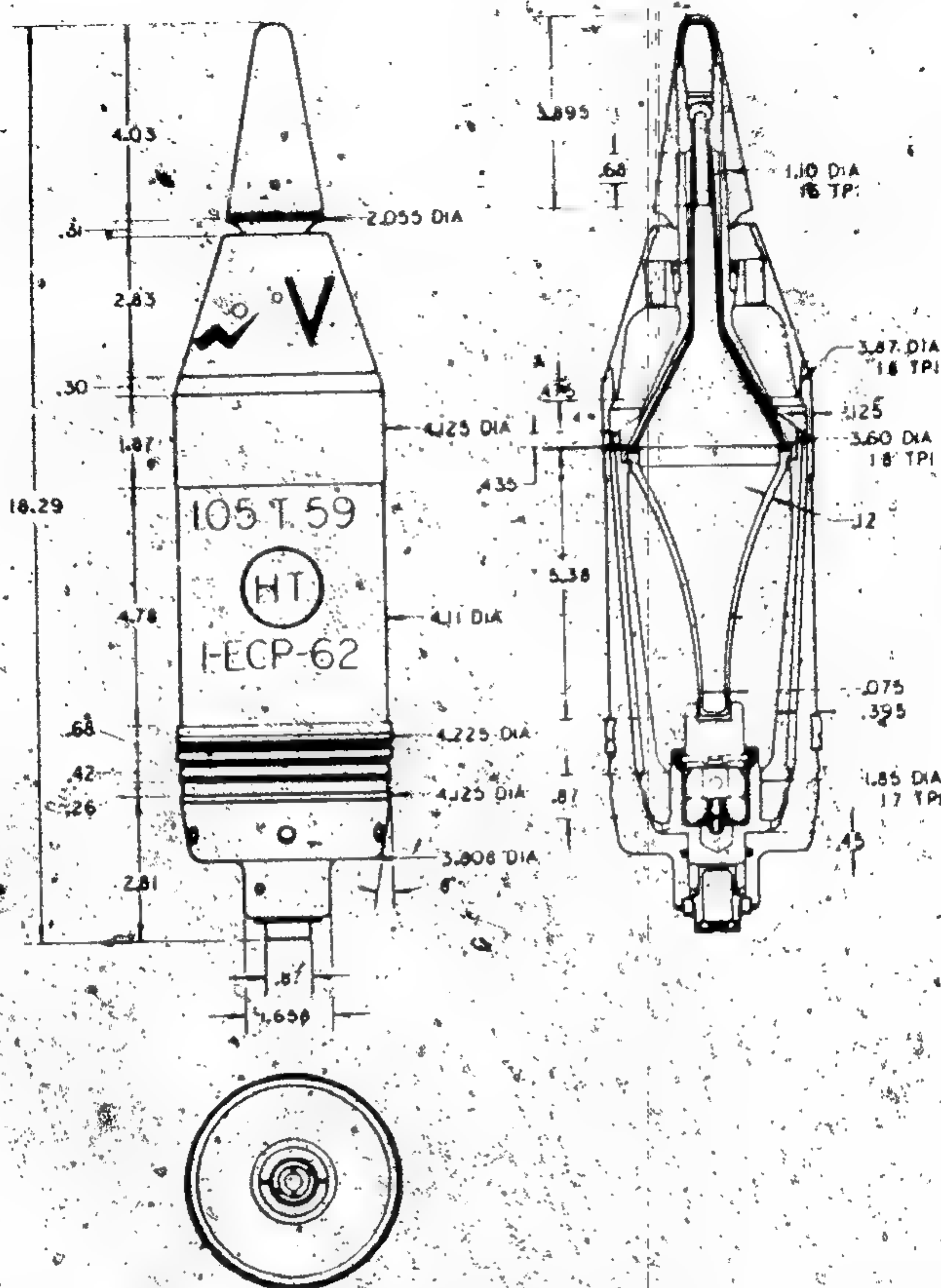
Figure 164. French 105-mm HEP projectile Model (?).

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Neg. 502977

ALL DIMENSIONS IN INCHES

Caliber	105 mm.	Fuze	Model (?) PIBD
Identification	61 OCC	Known using	
Type	HEAT	weapons	Howitzer M1950;
Weight (fuzed)	24.00 lb		AMX-13 and AMX-30
Bursting charge	1.60 lb		trucks
	RDX/TNT	Remarks	Projectile is
			early prototype
			for Model OCC-105-
			F1 projectile.

Figure 165. French 105-mm HEAT projectile Model 61 OCC.

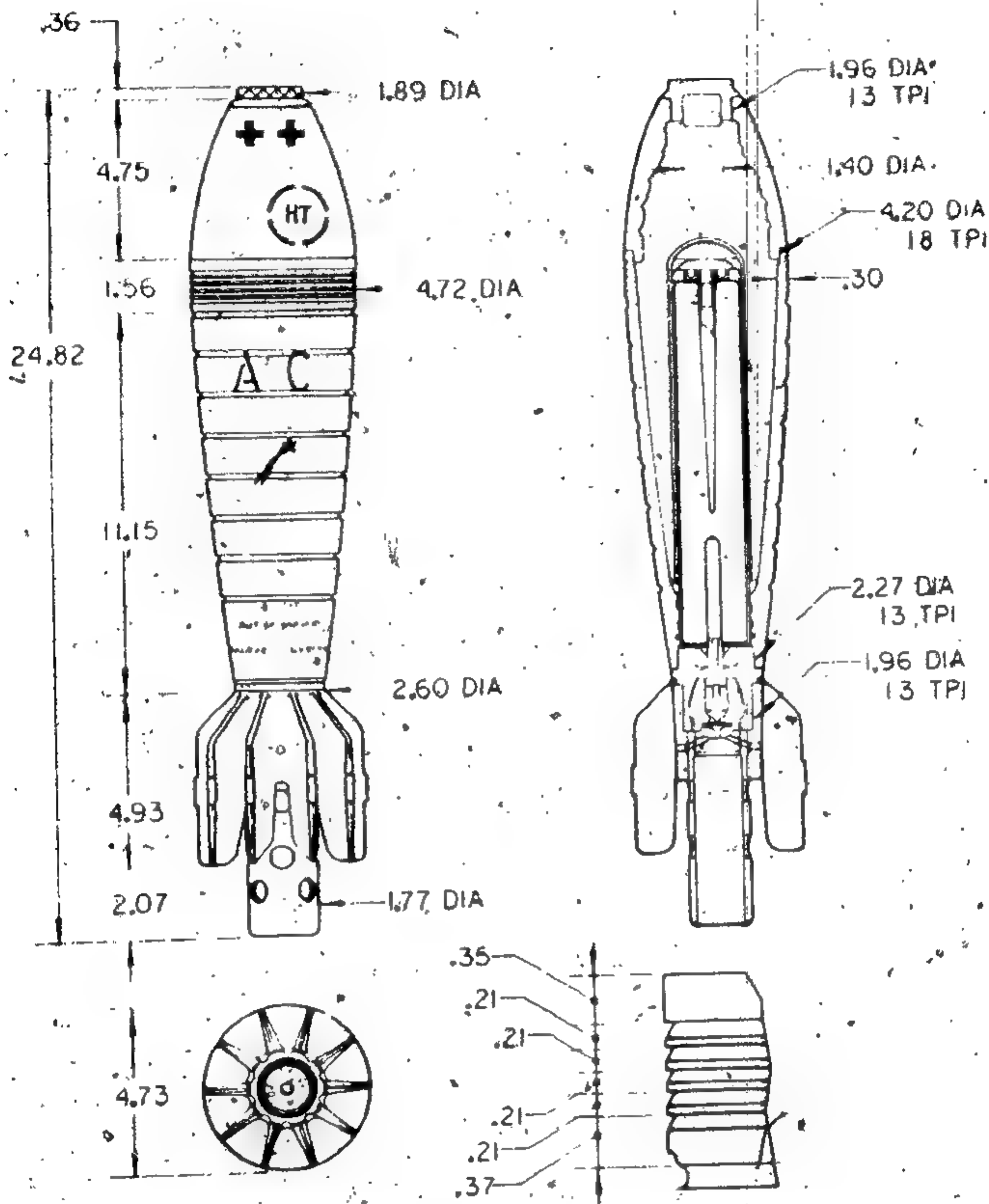
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# UNCLASSIFIED

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Neg. 502978

ALL DIMENSIONS IN INCHES

Caliber	120 mm	Fuze	Model V-19 point detonating
Identification	PEPA-ED (Type-1)	Known using weapons	Mortars AM 49, 50-51 and Model 1960 (light)
Type	HE	Remarks	Also uses Model V-18-1 point detonating fuze.
Weight (fuzed)	29.61 lb		
Bursting charge	5.13 lb TNT		

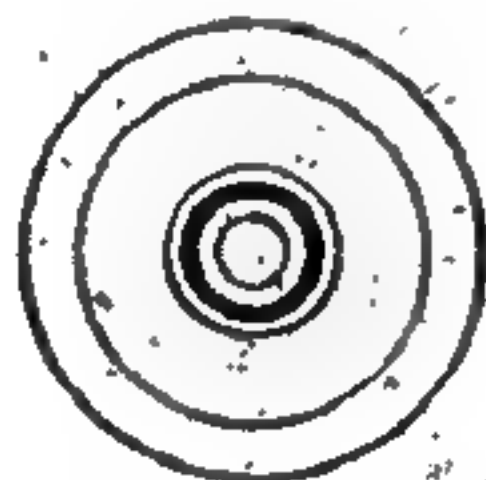
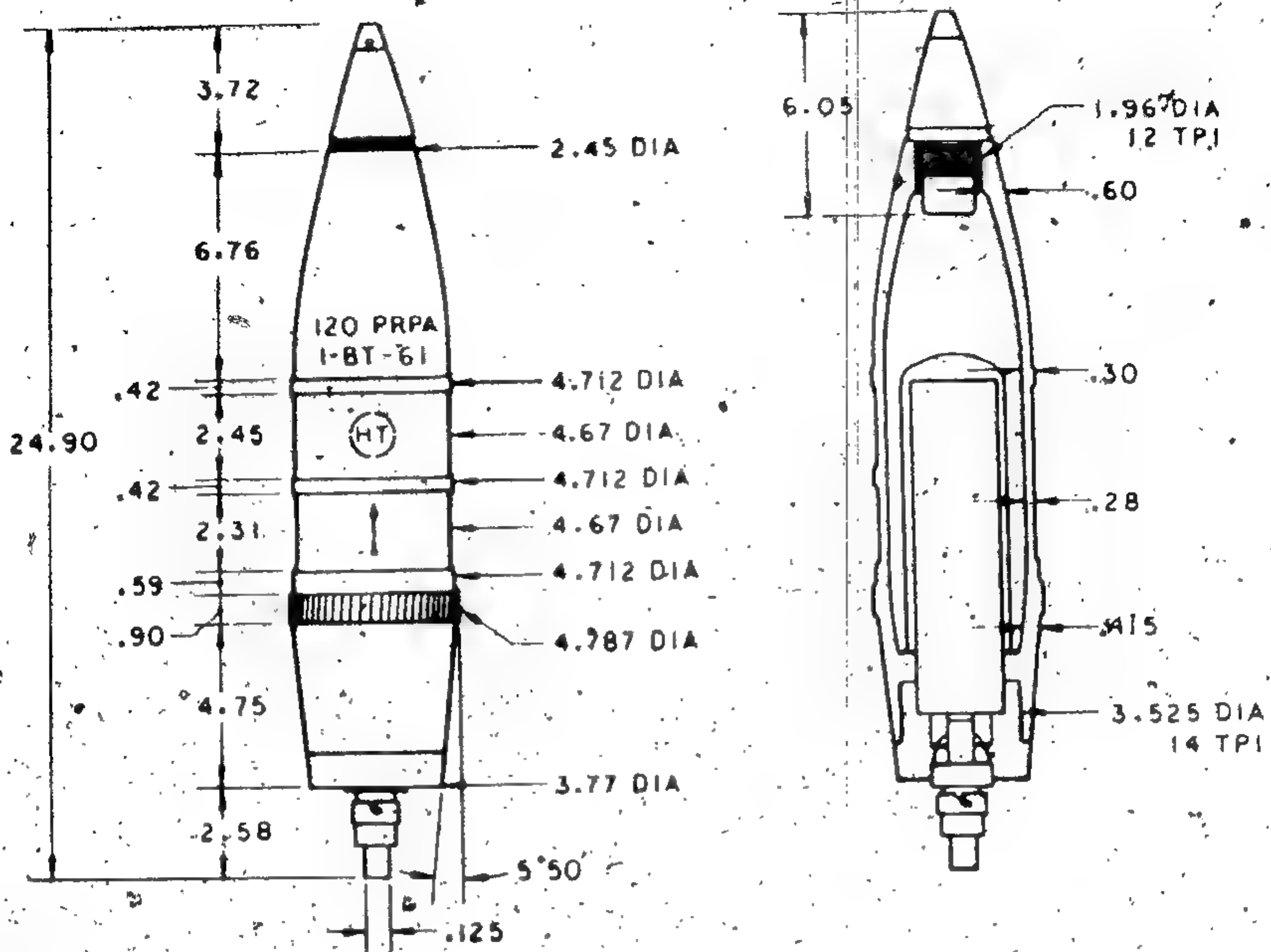
Figure 166. French 120-mm HE projectile Model PEPA-ED (Type 1).

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Neg. 502979

ALL DIMENSIONS IN INCHES

Caliber	120 mm	Bursting charge	6.06 lb Comp B or TNT
Identification	PRPA	Fuze	Model M51A5
Type	HE		point detonating.
Weight (fuzed)	37.42 lb	Known using weapon	Mortar Model 61

Figure 167. French 120-mm HE projectile Model PRPA.

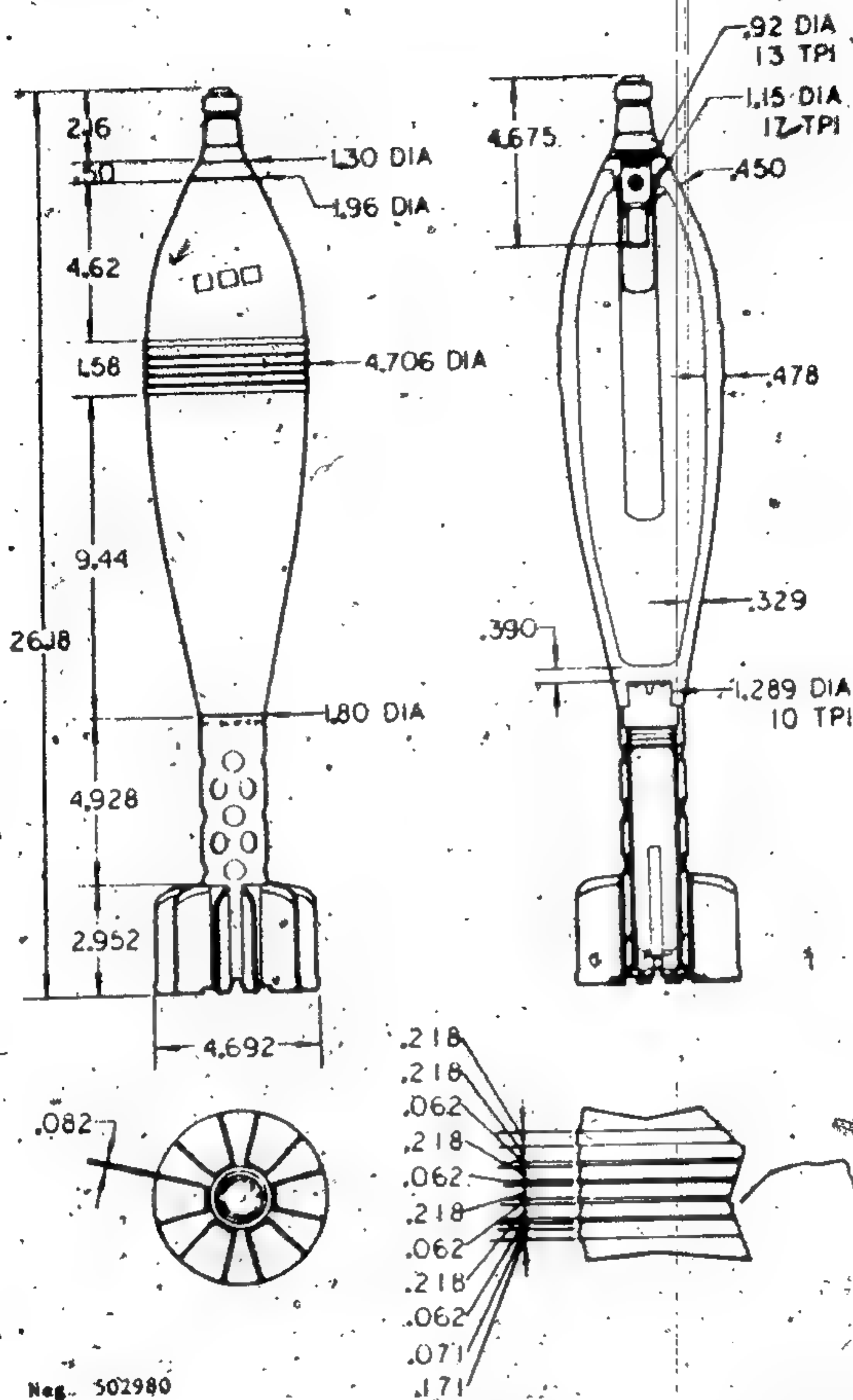
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Caliber	120 mm	Fuze	Model V-18-1 point detonating
Identification	44		
Type	HE (light)	Known using	
Weight (fuzed)	28.63 lb	weapons	Mortars AM 49, M1951, and M1960 (light)
Bursting charge	5.91 lb TNT		

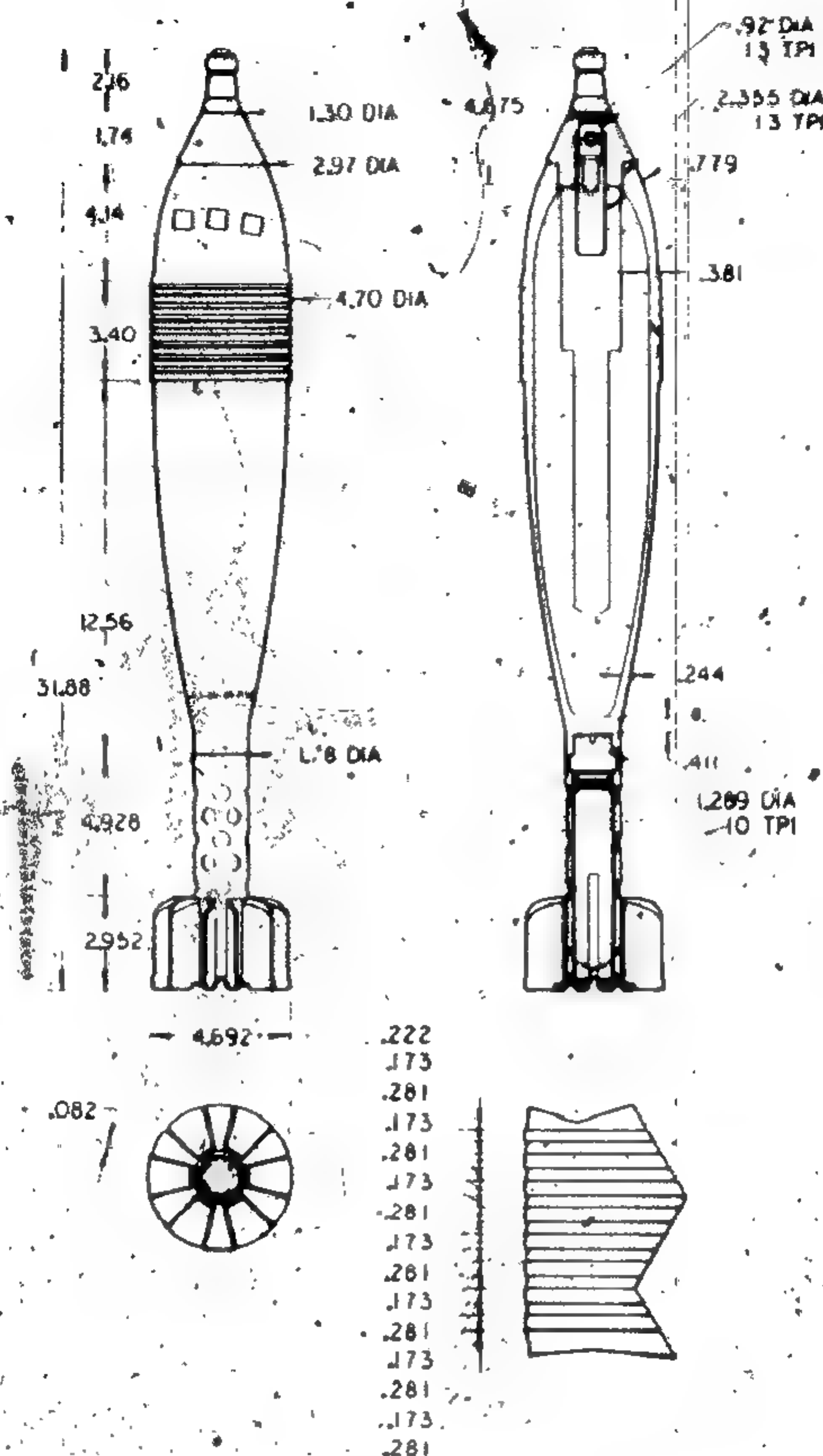
Figure 168. French 120-mm HE (light) projectile Model 44.

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Neg. 502981 ALL DIMENSIONS IN INCHES

Caliber	120 mm	Bursting charge	9.66 lb TNT
Identification	BT-1-50	Fuze	Model V-18-
Type	HE (heavy)		1 point
Weight (fuzed)	37.06 lb		detonating
		Known using weapons	Mortars AM 49 and M1951

Figure 169. French 120-mm HE (heavy) projectile Model BT-1-50.

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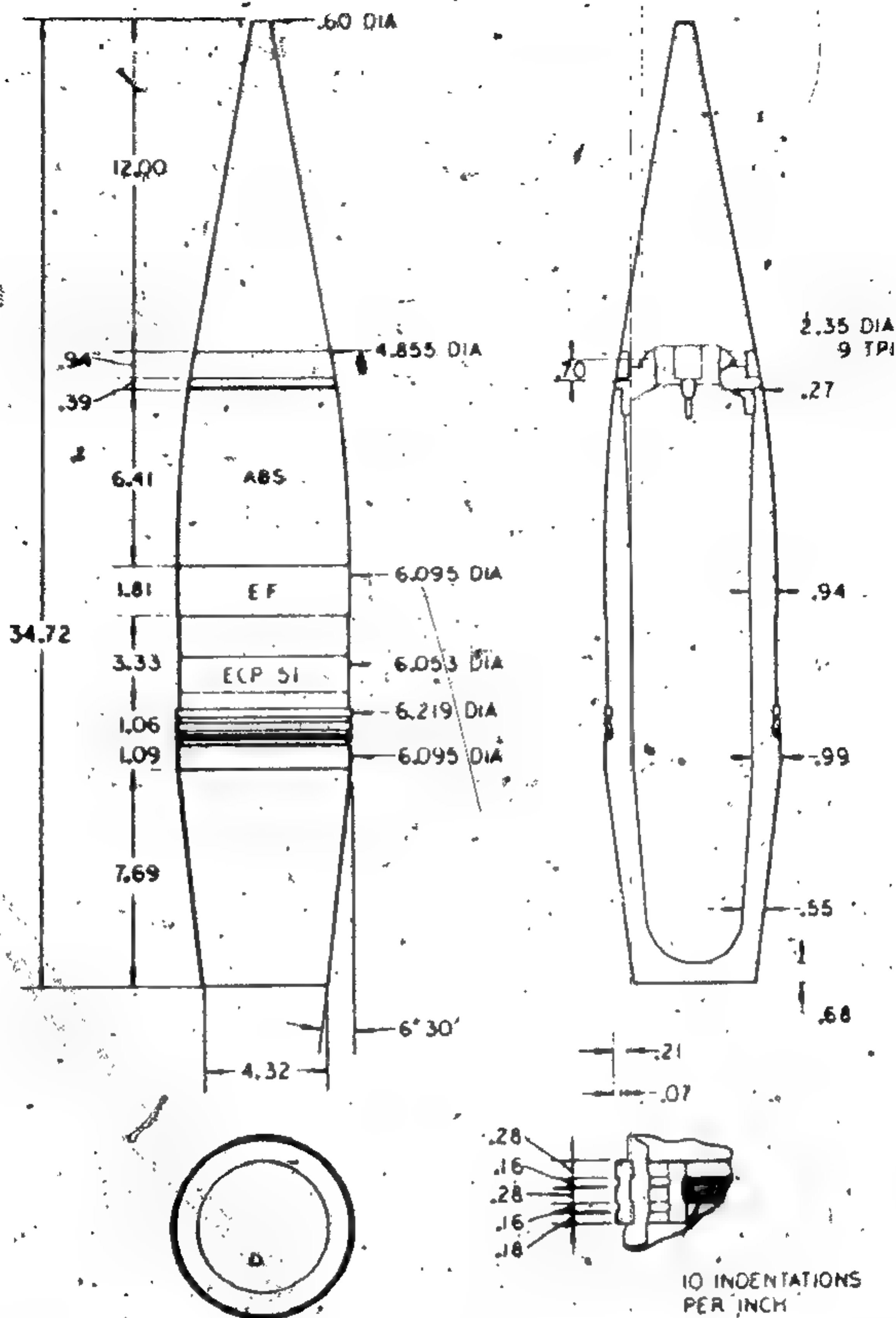


Fig. 502982

ALL DIMENSIONS IN INCHES

Caliber	155 mm	Fuze	Model (?) point
Identification	(?)		detonating
Type	HE	Known using	
Weight	96.00 lb	weapon	Howitzer M1950
Bursting charge	17.36 lb TNT	Remarks	Illustrated without fuze. Projectile weight without fuze

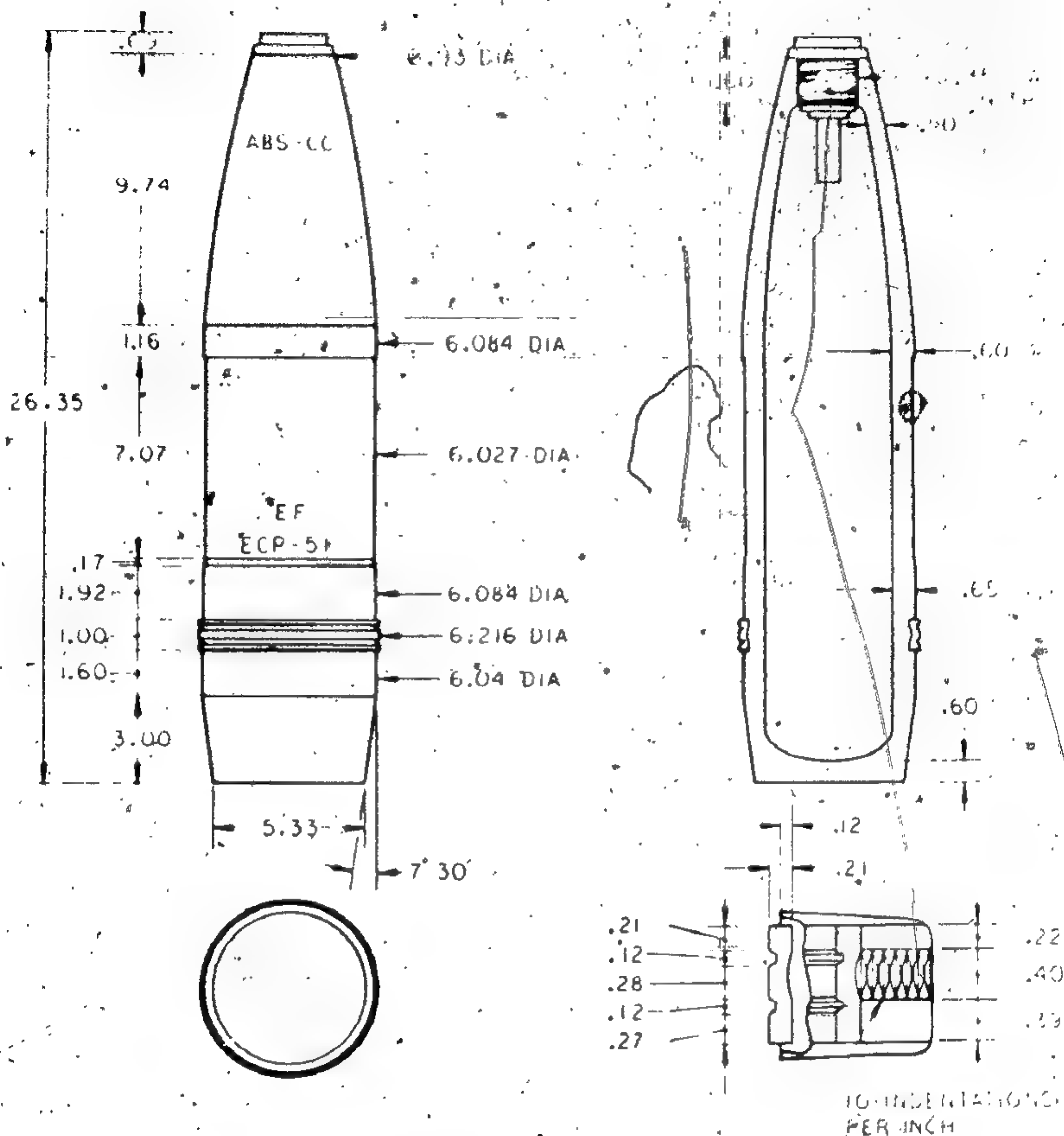
Figure 170. French 155-mm HE projectile Model (?).

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Neg. 502983

ALL DIMENSIONS IN INCHES

Caliber	155 mm	Fuze	Model (?) point detonating
Identification	(?)		
Type	HE	Known using	
Weight	92.50 lb	weapon	Howitzer M1950
Bursting charge	17.5 lb TNT	Remarks	Illustrated without fuze. Projectile weight without fuze.

Figure 171. French 155 mm HE projectile Model (?).

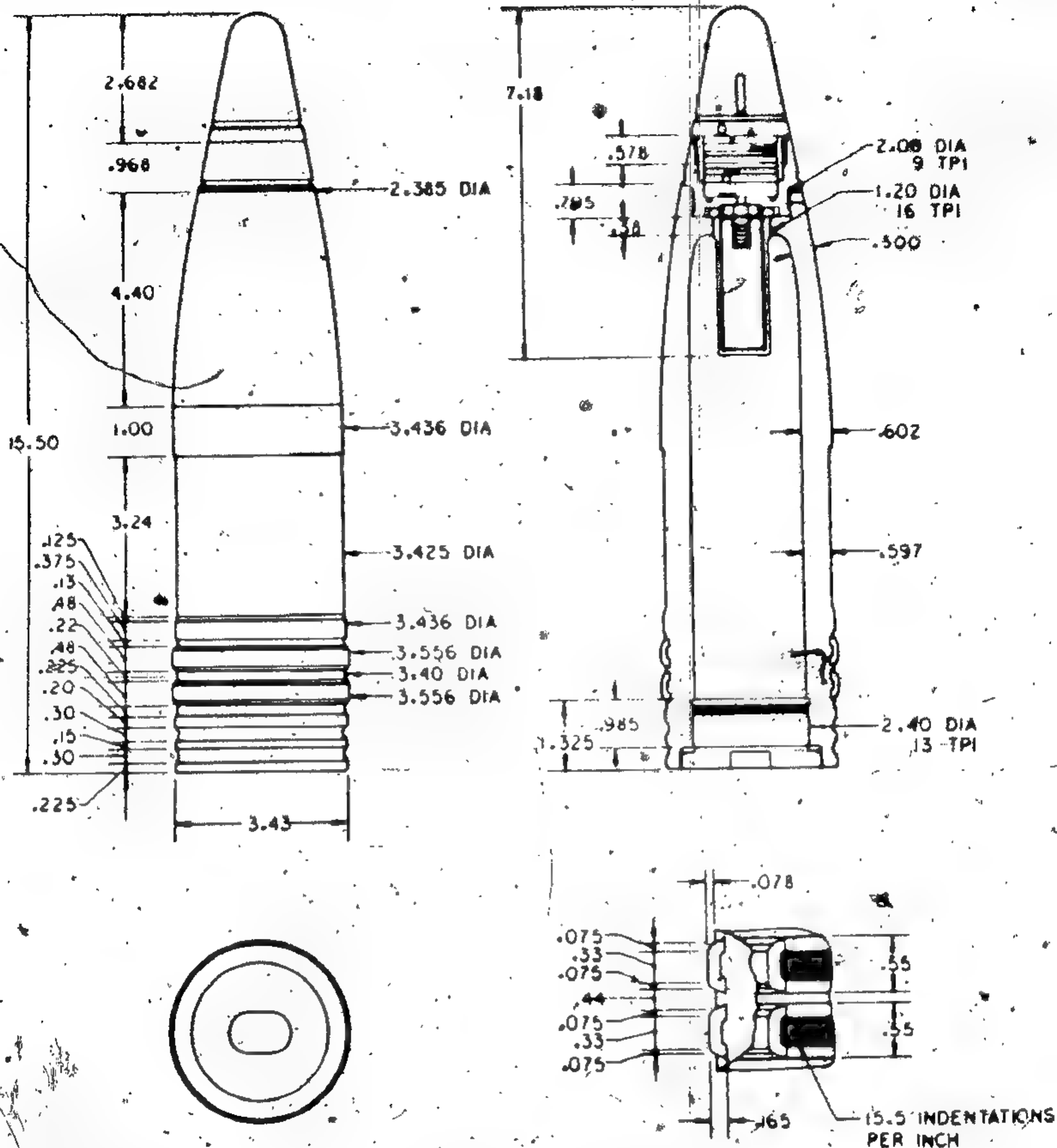
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# UNCLASSIFIED

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Original



Neg. 502984

ALL DIMENSIONS IN INCHES

Caliber	88 mm	Fuze	Model 3/30
Identification	L/4.5		mechanical
Type	HE		time
Weight (fuzed)	20.35	Known using	
Bursting charge	1.90 lb amatol	weapons	AA guns M18, M36, and M37

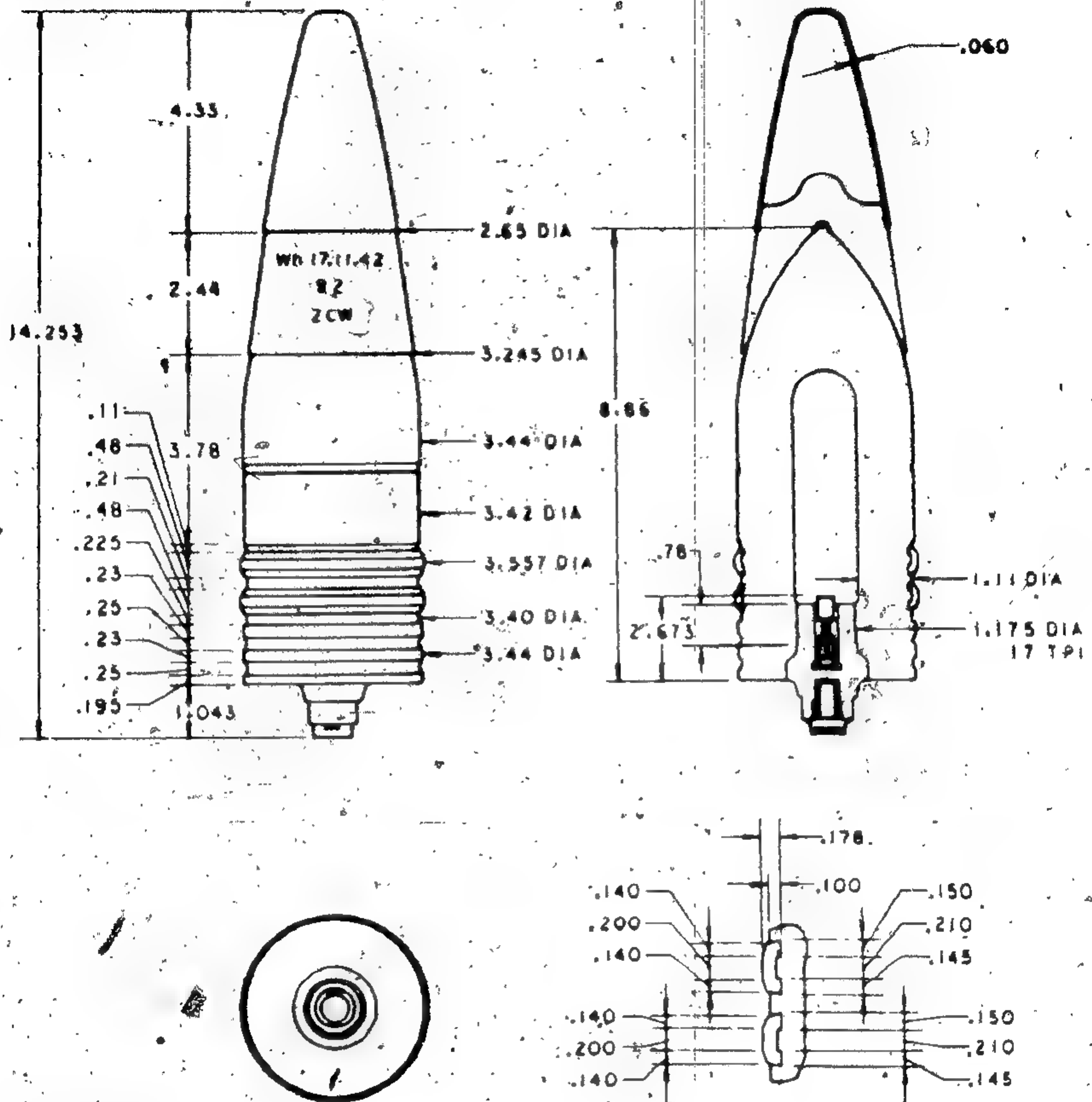
Figure 172. German (World War II) 88-mm HE projectile Model L/4.5.

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Original

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Neg. 502985

ALL DIMENSIONS IN INCHES

Caliber	88 mm	Bursting charge	0.25 lb. RDX
Identification	(?)	Fuze	Model (?)
Type	APC-T		base
Weight (fuzed)	22.00 lb		detonating
	(approx.)	Known using	
		weapons	AA guns M18, M36, and M37

Figure 173. German (World War II) 88-mm APC-T projectile Model (?).

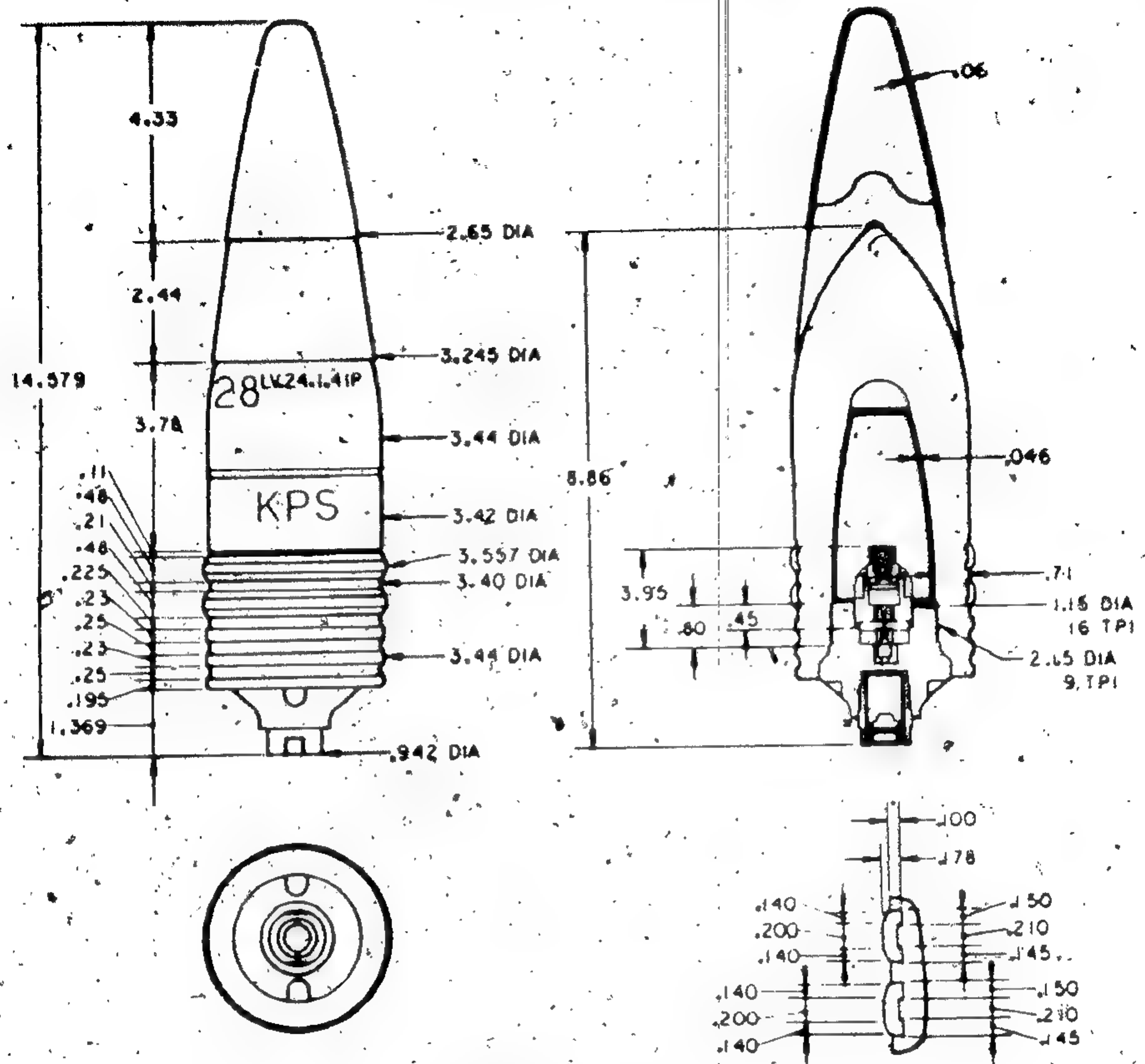
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Original



Neg. 502986

ALL DIMENSIONS IN INCHES

Caliber ----- 88 mm  
 Identification ----- (?)  
 Type ----- APC-T  
 Weight (fuzed) ----- 21.00 lb

Bursting charge ----- 0.33 lb  
 Fuze ----- TNT/PETN  
 Model Bd. Z  
 base  
 detonating  
 Known using weapons ----- AA guns M18,  
 M36, and M37

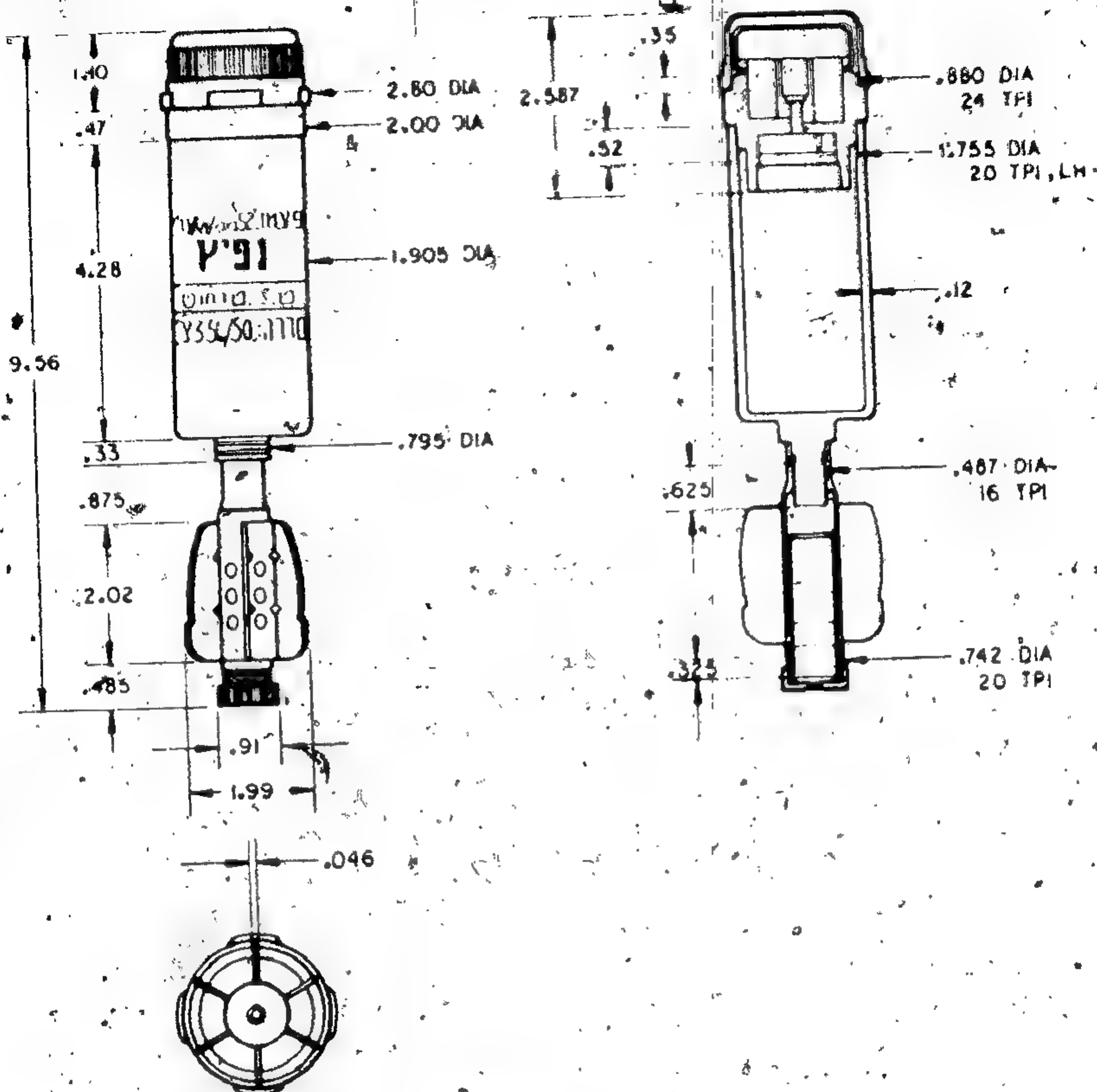
Figure 174. German (World War II) 88-mm APC-T projectile Model (?).

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Original



Neg. 502987

ALL DIMENSIONS IN INCHES

Caliber	52 mm	Bursting charge	0.36 lb TNT
Identification	MK 2/1	Fuze	Model (?)
Type	HE		point
Weight (fuzed)	2.25 lb		detonating
		Known using weapon	Soltam 2-inch Mortar

Figure 175. Israeli 52-mm HE projectile Model MK 2/1.

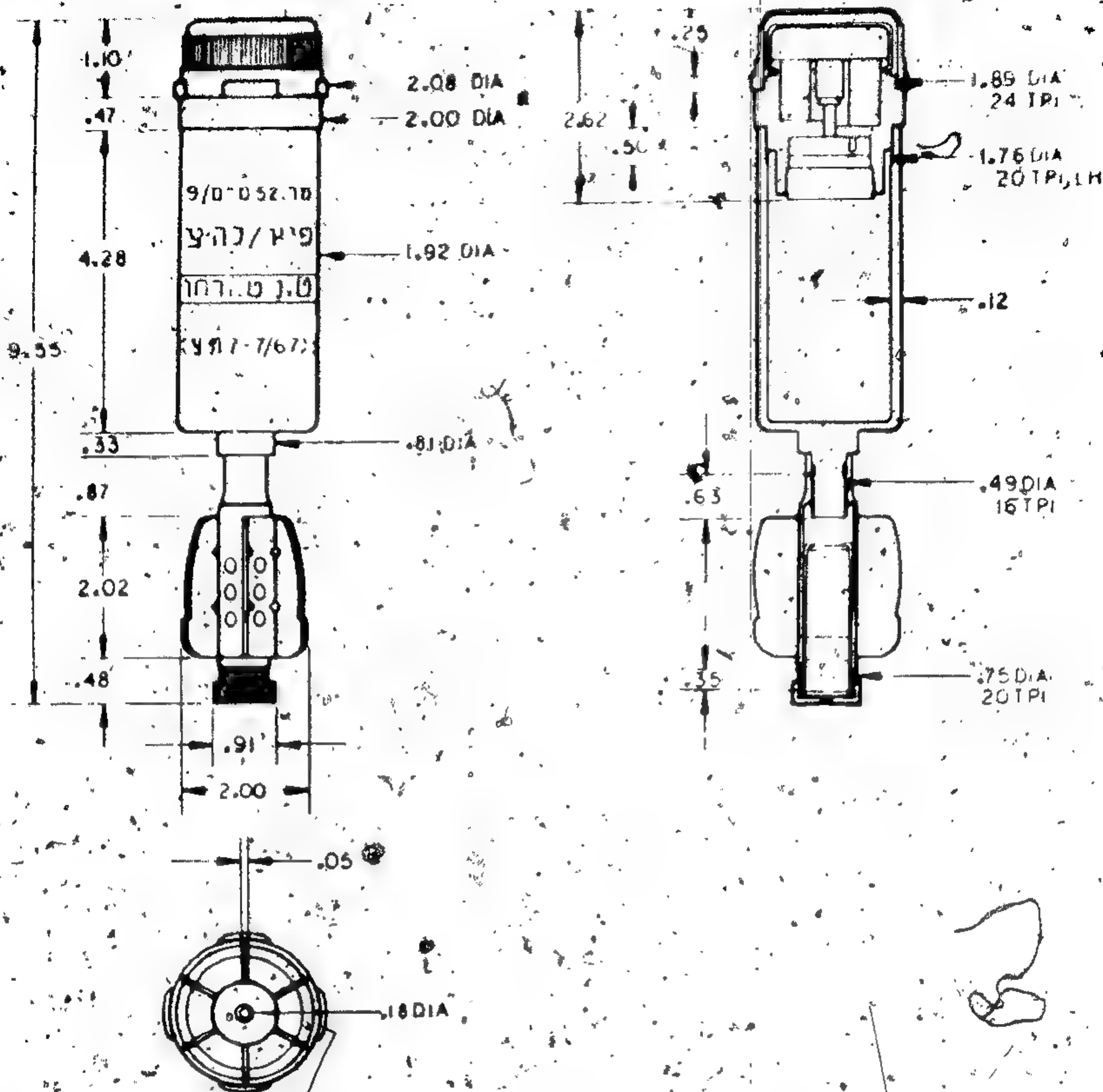
# UNCLASSIFIED



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Original



Neg. 502988

ALL DIMENSIONS IN INCHES

Caliber	52 mm	Known using	
Identification	(?)	weapon	Soltam 2-inch Mortar
Type	HE	Remarks	This projectile appears to be a later version of the basic projectile figure on preceding page.
Weight (fuzed)	2.25 lb		
Bursting charge	0.38 lb TNT		
Fuze	Model (?) point detonating		

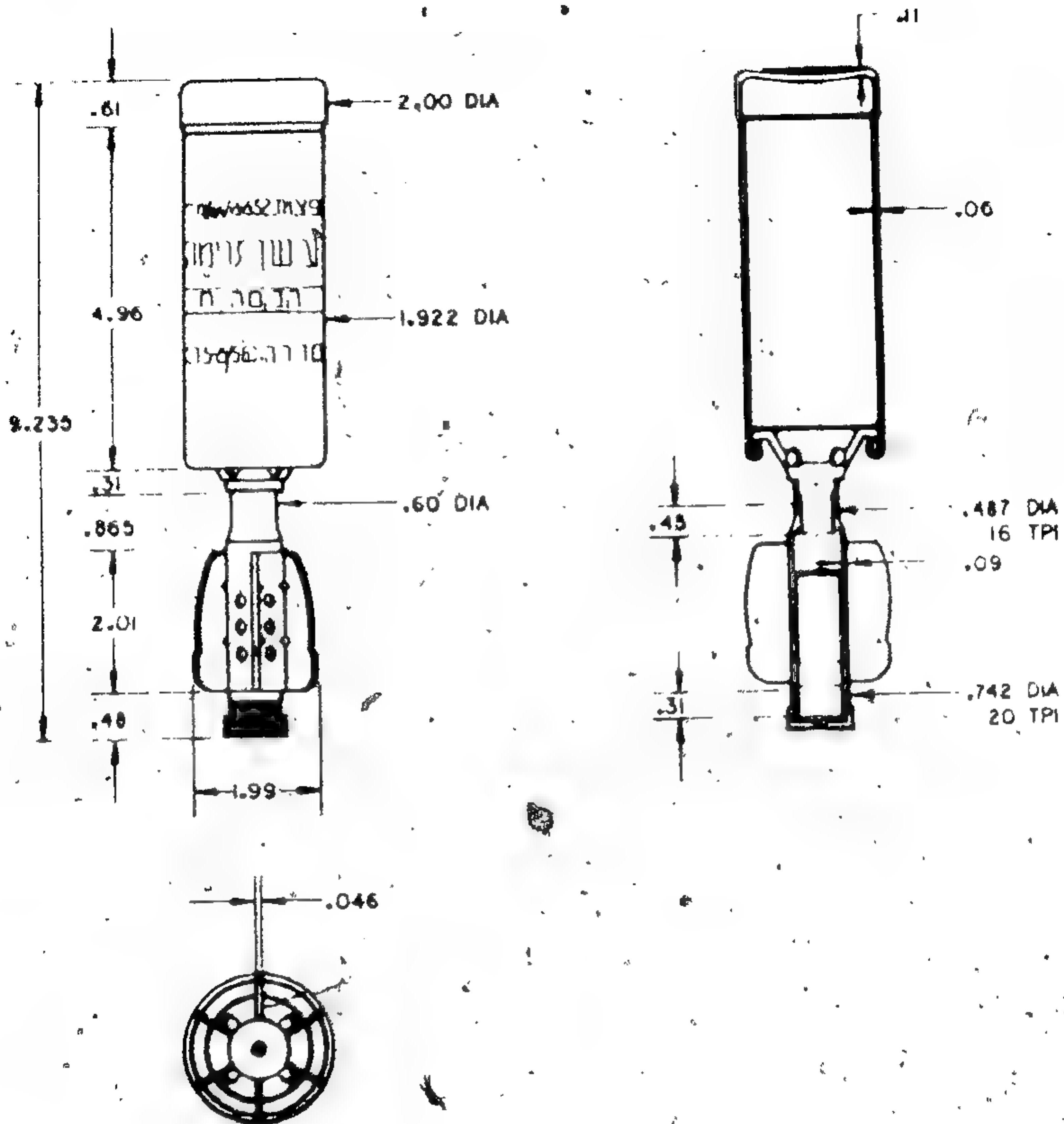
Figure 175a. Israeli 52-mm HE projectile Model (?) (variant).

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Neg. 502989

ALL DIMENSIONS IN INCHES

Caliber	52 mm	Bursting charge	1.18 lb white phosphorus
Identification	MK 1/2		
Type	Smoke	Known using	
Weight	2.00 lb	weapon	Soltam 2-inch Mortar

Figure 176. Israeli 52-mm smoke projectile Model MK 1/2.

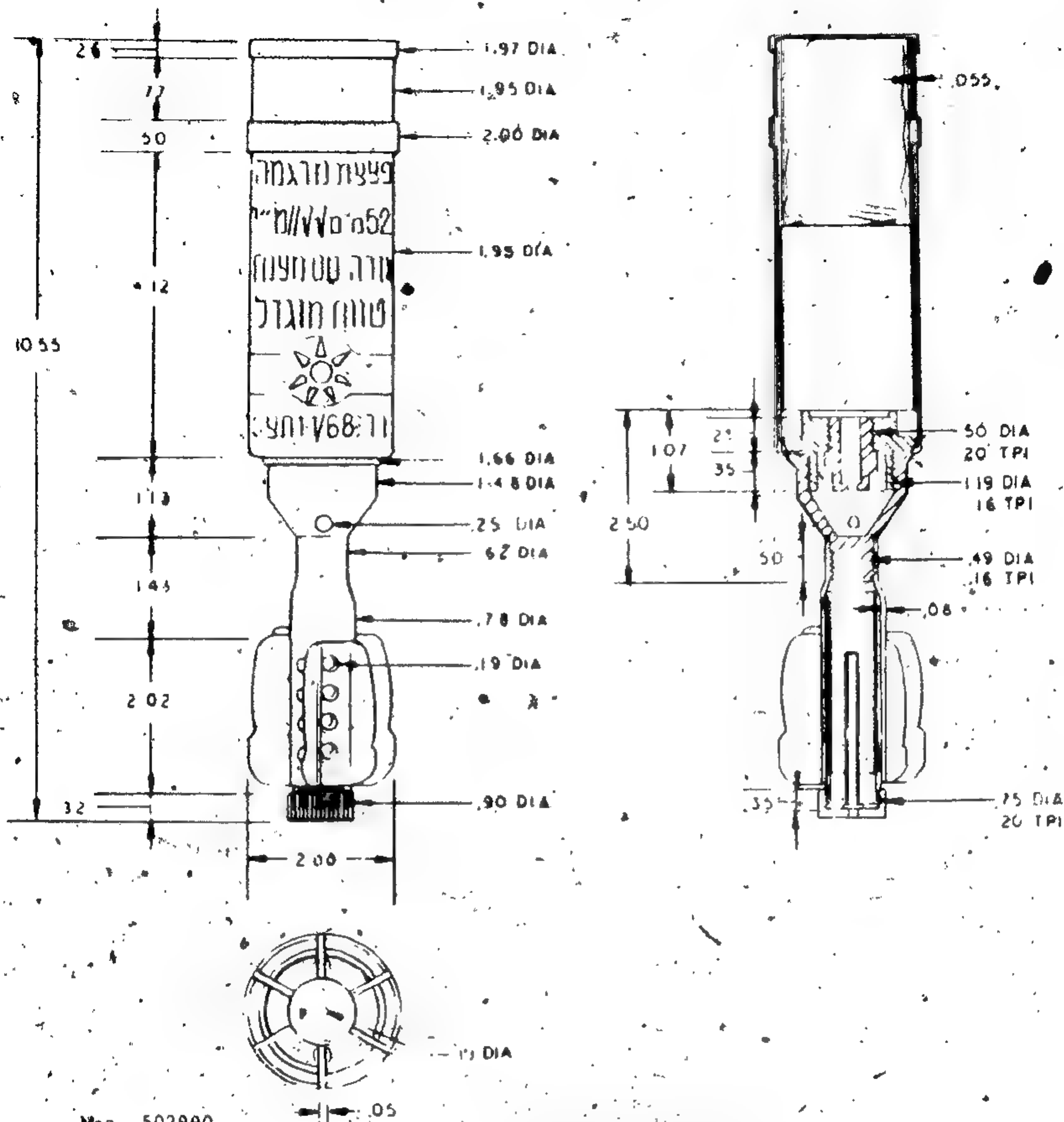
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Original



Caliber	52 mm	(Continued)	Composition un-
Identification	(?)		known
Type	Illuminating	Fuze	None. Has a delay
Weight (fuzed)	1.82 lb		element which is
Bursting charge	None - has		ignited by the
	0.04 lb		propellant
	expelling	Known using	
	charge	weapon	Soltam 2-inch
			mortar

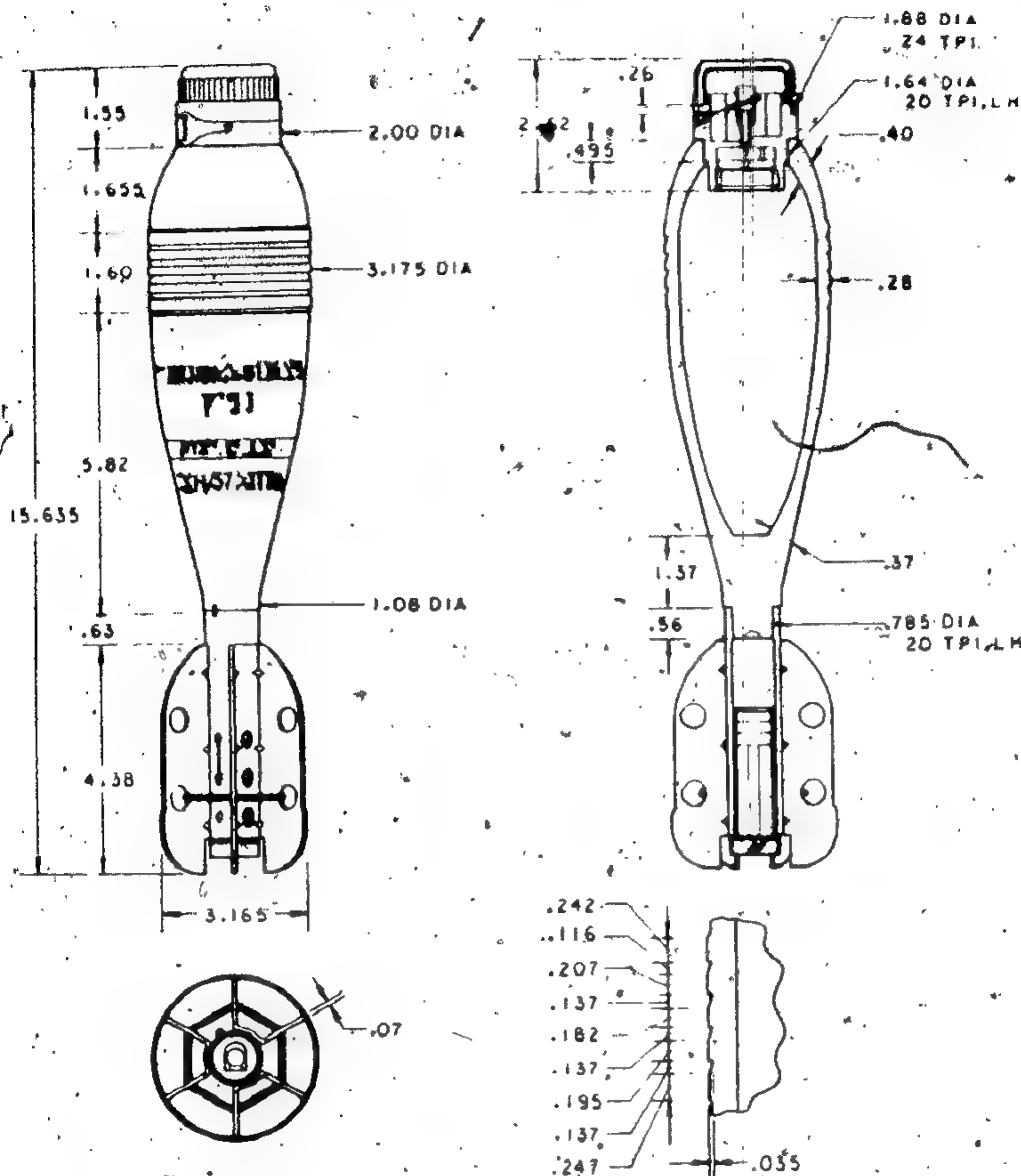
Figure 176a. Israeli 52-mm illuminating projectile Model (?).

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Original

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Neg. 502991

ALL DIMENSIONS IN INCHES

Caliber	81 mm	Fuze	Model (?) point detonating
Identification	MK 8/3	Known using	
Type	HE	weapon	Mortar MK 2
Weight (fuzed)	10.00 lb	Remarks	Using weapon is of UK
Bursting charge	0.77 lb amatol		origin.

Figure 177. Israeli 81-mm HE projectile Model MK 8/3.

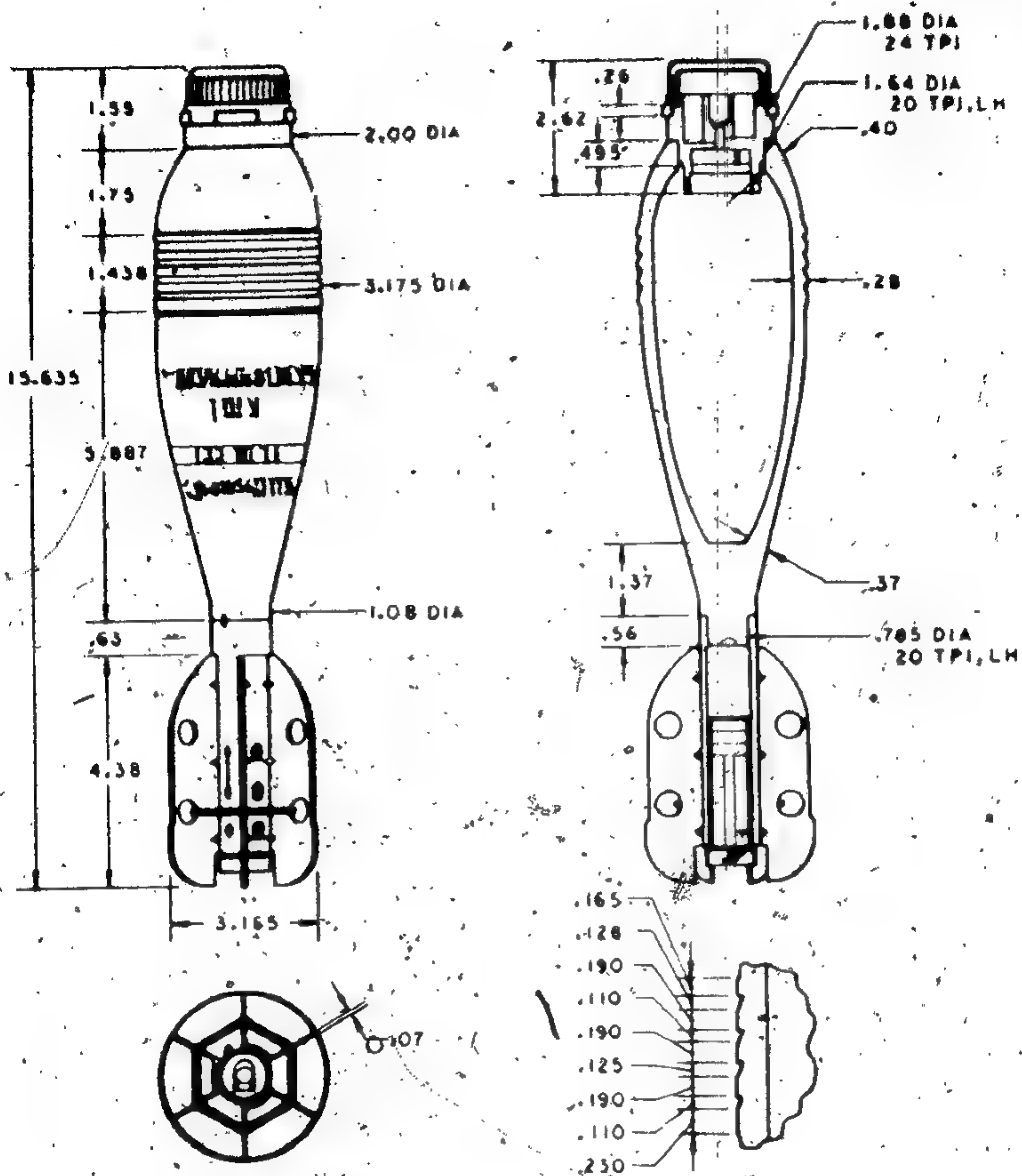
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Original



Neg. 502992

ALL DIMENSIONS IN INCHES

Caliber ----- 81 mm  
 Identification ----- MK 16/3  
 Type ----- Smoke  
 Weight (fuzed) ----- 9.33 lb

Bursting charge ----- 1.5 lb white phosphorus  
 Fuze ----- Model (?)  
 point detonating  
 Known using weapon --- Mortar MK 2  
 Remarks ----- Using weapon  
 is of UK origin.

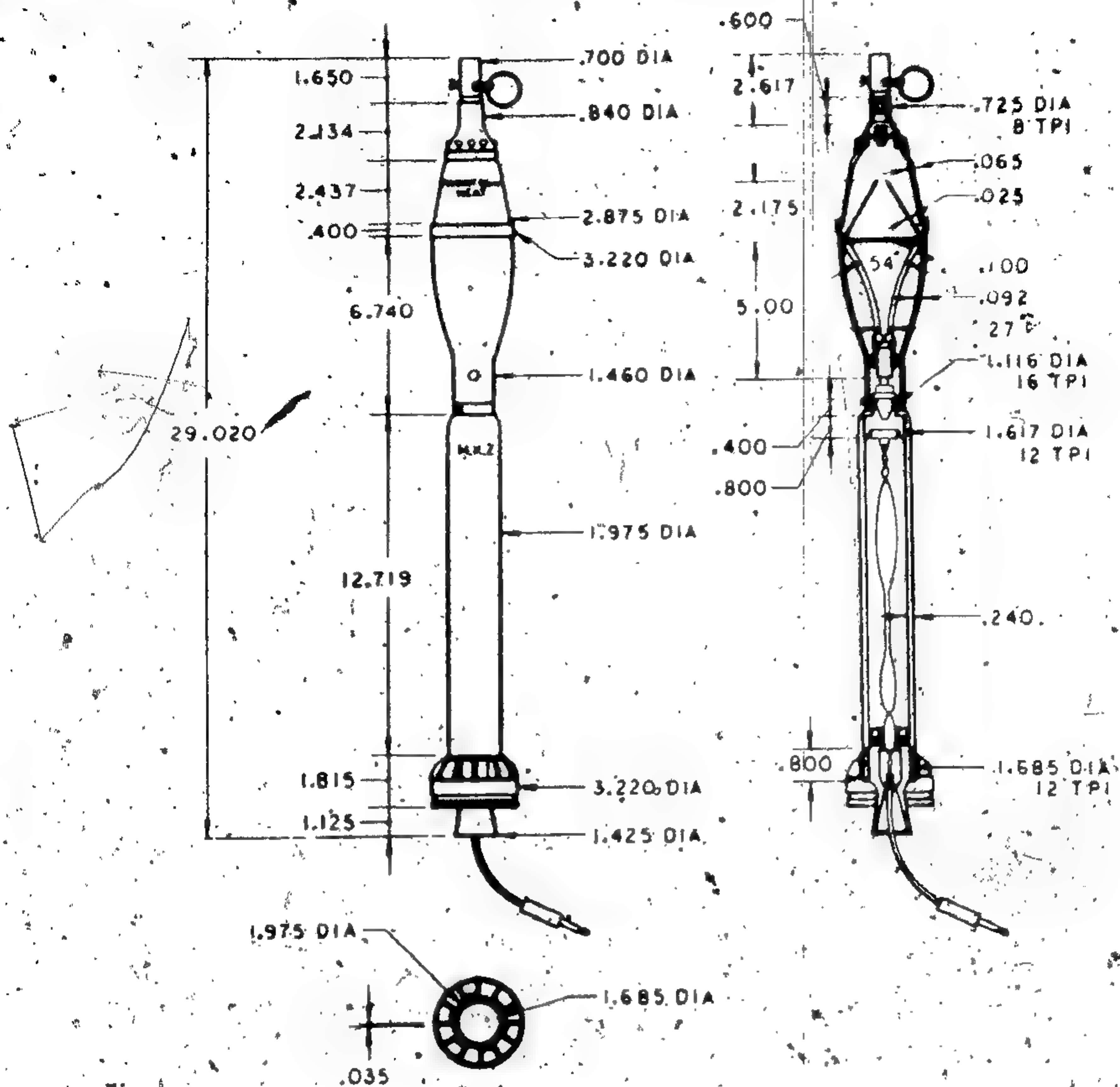
Figure 178. Israeli 81-mm smoke projectile Model MK 16/3.

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Neg 502993

ALL DIMENSIONS IN INCHES

Caliber	82 mm	Bursting charge	0.70 lb RDX/TNT
Identification	(?)	Fuze	Model (?) PIBD
Type	HEAT	Known using weapon	Rocket launcher
Weight (fuzed)	5.50 lb		Model 19 MKA

Figure 179. Israeli 82-mm HEAT projectile. Model (?).

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Original



Caliber	82 mm
Identification	MK 5
Type	HE
Weight (fuzed)	8.85 lb
Bursting charge	1.02 lb TNT

Fuze	Model V18 I.R.
	point detonating
Known using weapon	Rocket launcher.
	Model 19 MKA
Remarks	Fuze appears to be copy of French V18.

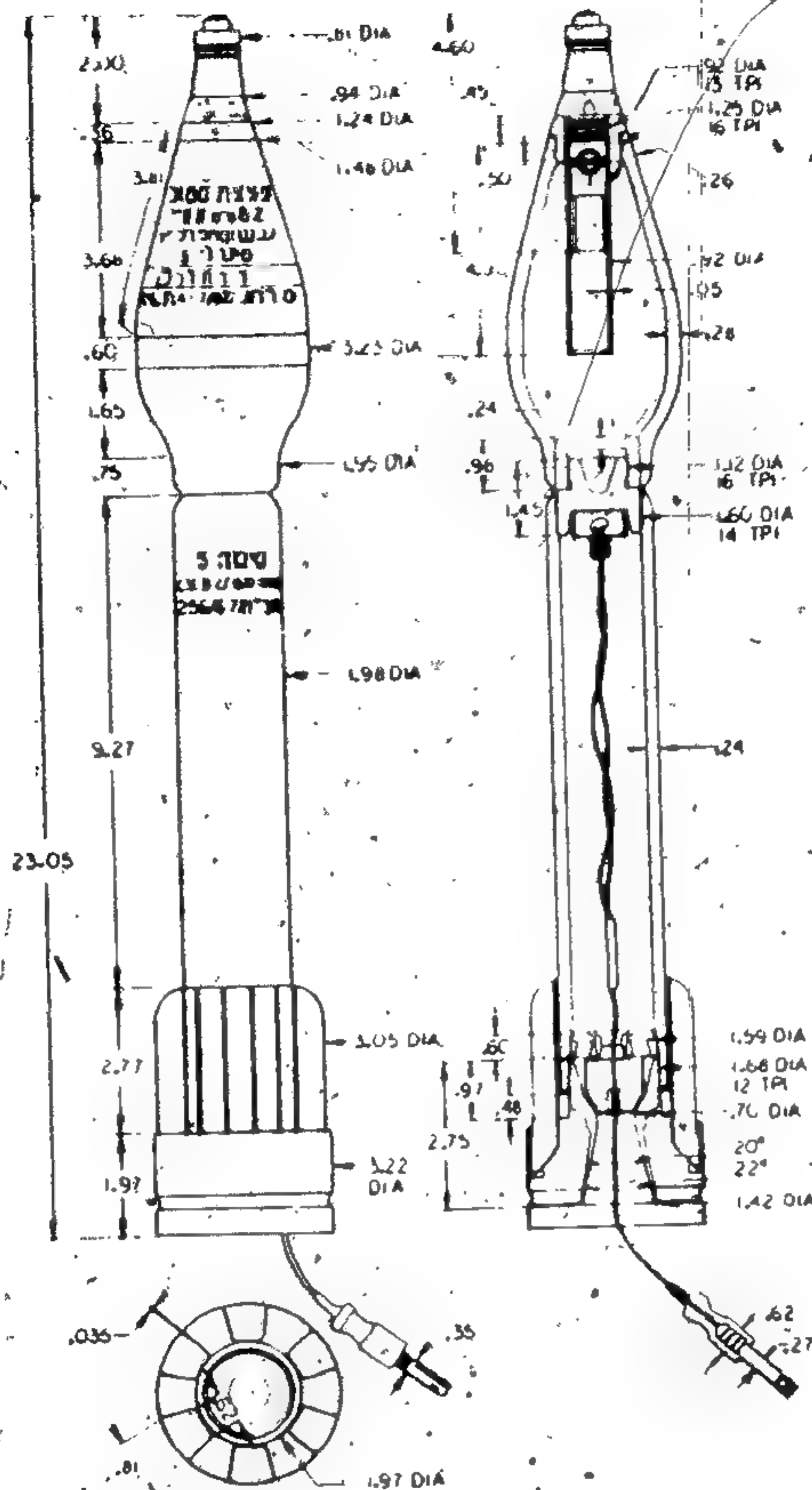
Figure 179a. Israeli 82-mm HE projectile Model MK 5.

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ALL DIMENSIONS IN INCHES  
Neg. 502995

Caliber	82 mm	Fuze	Model V18 I.R.
Identification	MK 5		point detonatin
Type	Smoke	Known using	
Weight (fuzed)	8.91 lb	weapon	Rocket launcher
Bursting charge	1.05 lb		Model 19 MKA
	white	Remarks	Fuze appears to
	phosphorus		be a copy of
			French V18.

Figure 179b. Israeli 82-mm smoke projectile Model MK 5.

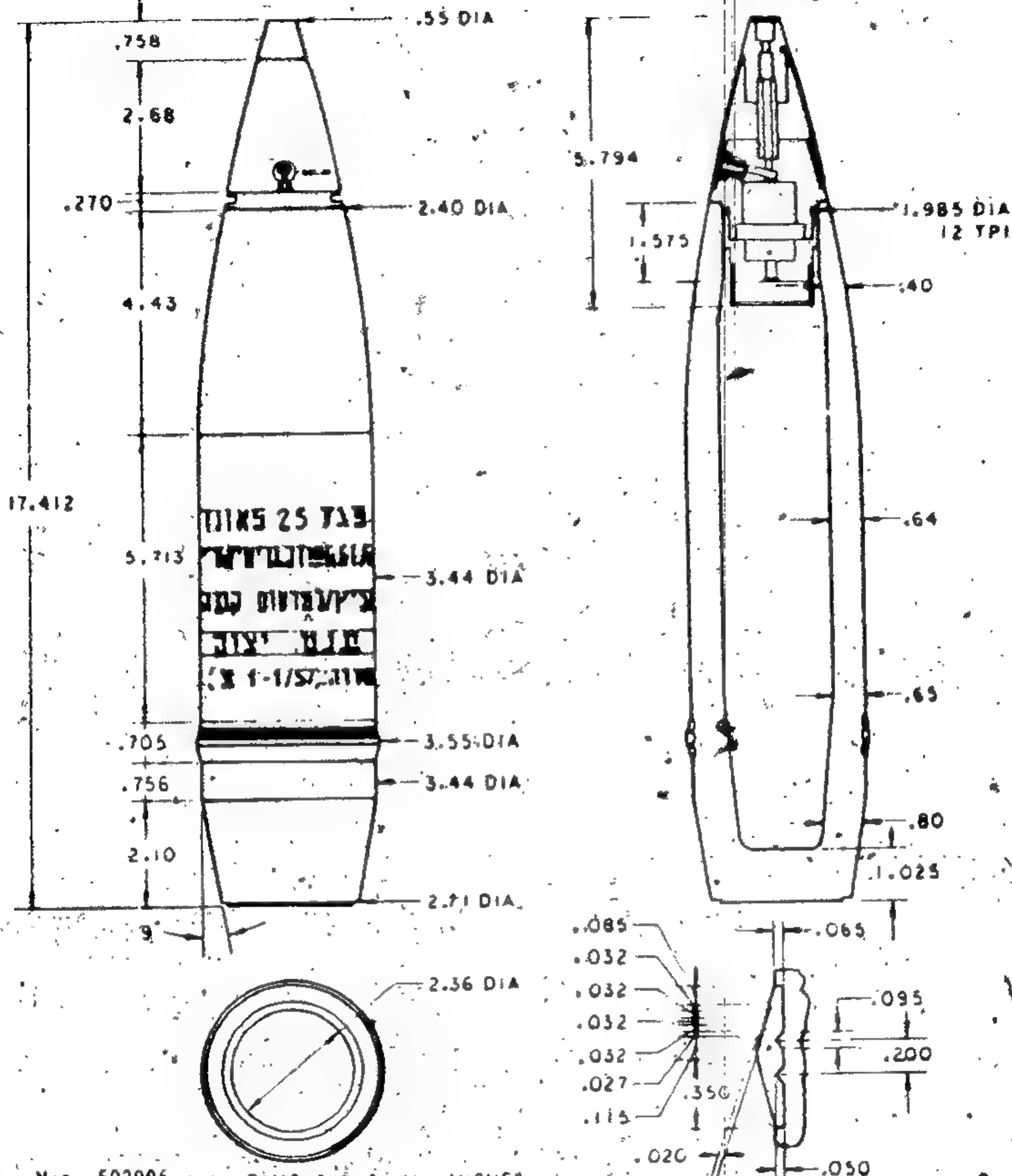
# UNCLASSIFIED



# UNCLASSIFIED

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Original



Neg. 502996 ALL DIMENSIONS IN INCHES

Caliber	88 mm (25 pdr)	Fuze	Model M51A5 point detonating
Identification	(?)	Known using	
Type	HE	weapon	Field gun-howitzer MK 2 (25-pounder)
Weight (fuzed)	25.00 lb	Remarks	Using weapon is of UK origin. Fuze is of US manufacture.
Bursting charge	1.82 lb TNT		

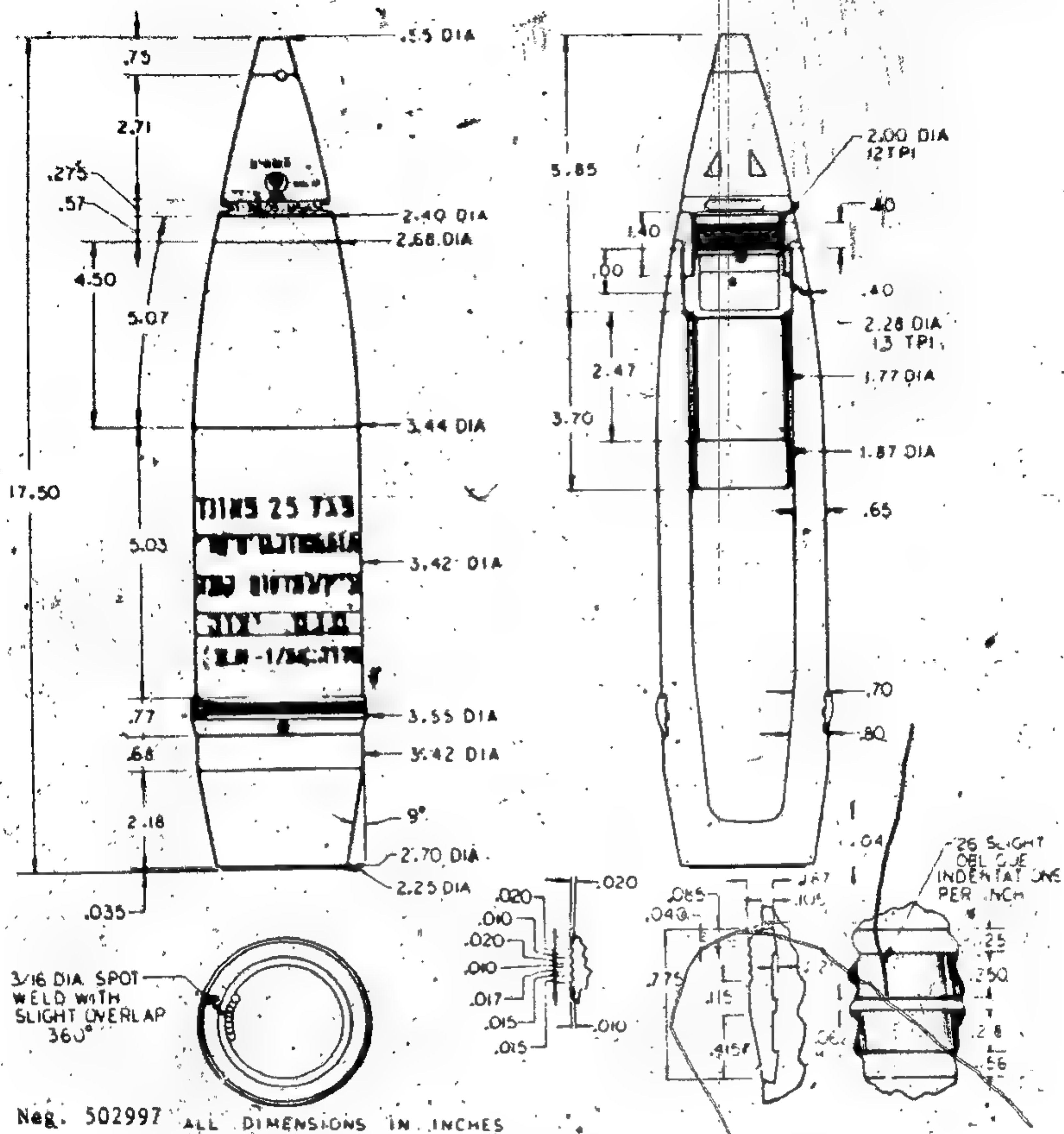
Figure 180. Israeli 88-mm HE projectile Model (?).

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Caliber	88 mm (25 pdr)	Fuze	Model M51A5 detonating
Identification	?	Known using	
Type	HE	weapon	Field gun-howitzer MK 2 (25-pounder)
Weight (fuzed)	25.00 lb	Remarks	Fuze is of US manufacture. Using weapon is of UK origin.
Bursting charge	1.00 lb TNT		

Figure 180a. Israeli 88-mm HE projectile Model ? (variant).

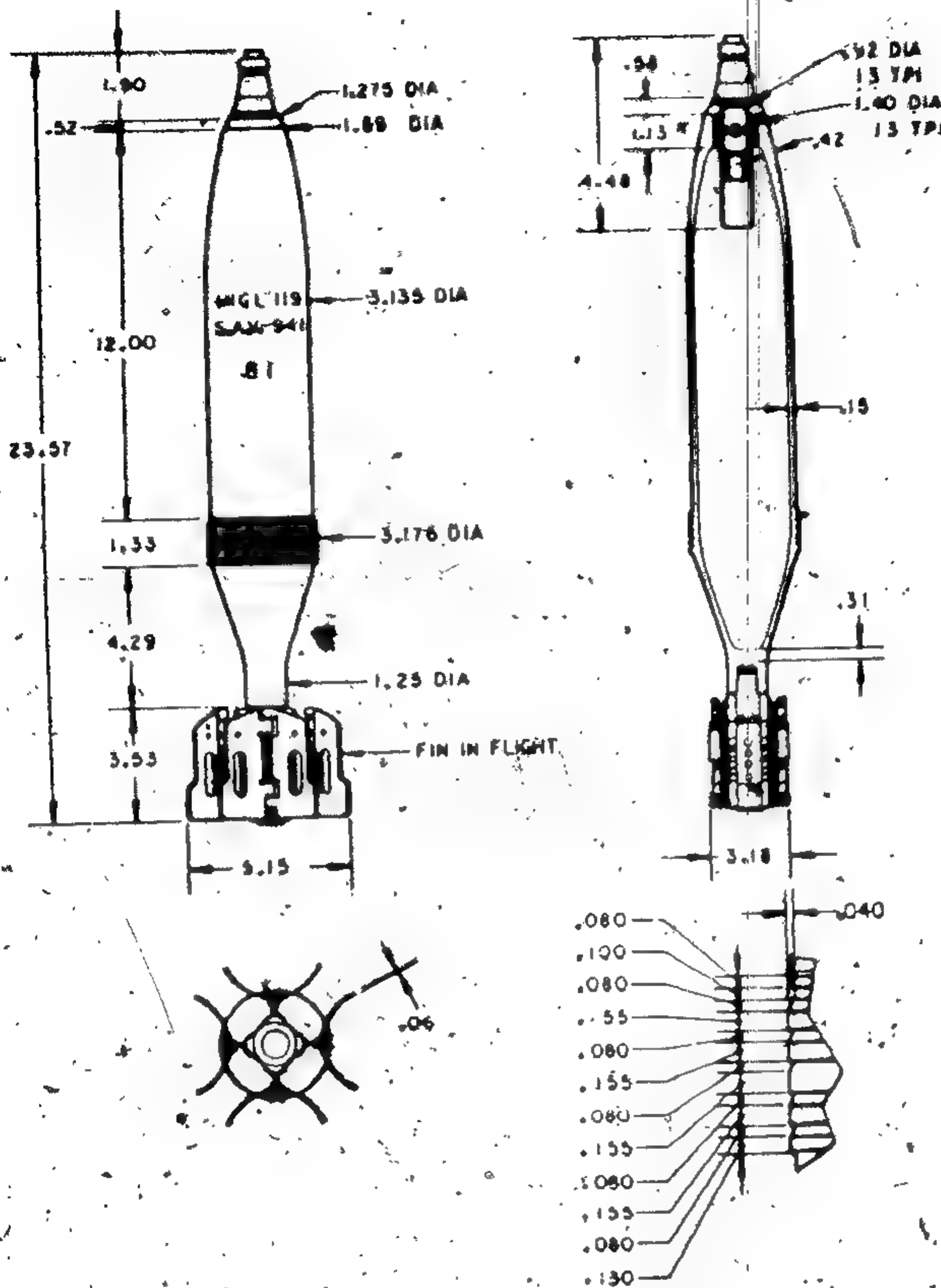
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Original



Neg 502998

ALL DIMENSIONS IN INCHES

Caliber ----- 81 mm  
 Identification ----- (?)  
 Type ----- HE  
 Weight (fuzed) ----- 15.00 lb (?)

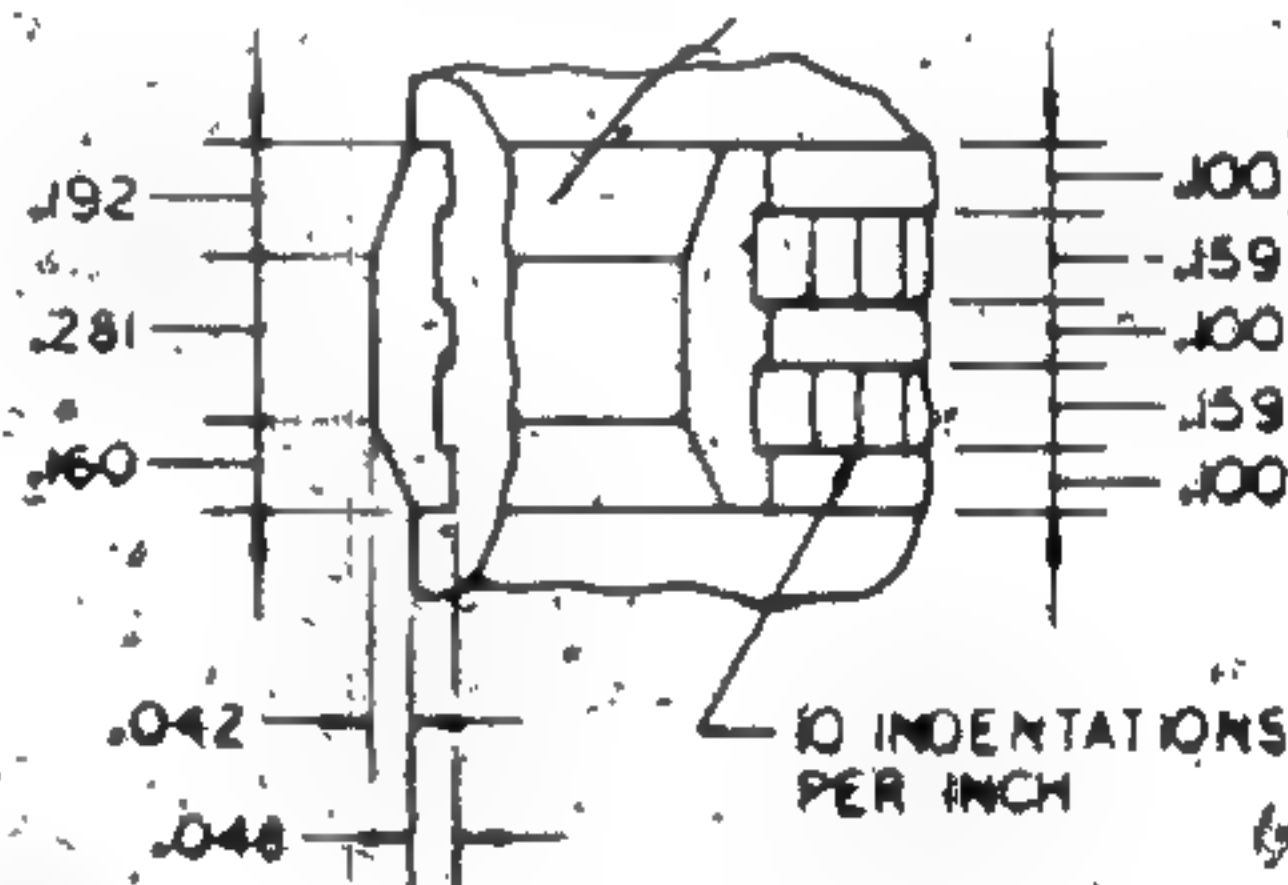
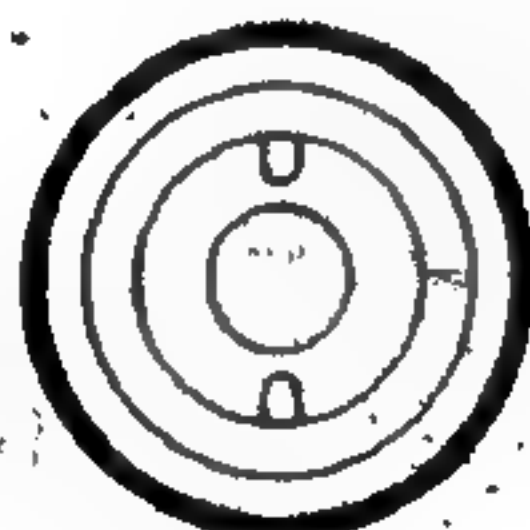
Bursting charge ----- 4.41 lb picric acid (?)  
 Fuze ----- Model 81-1-R point detonating  
 Known using weapon ----- Mortar Model 35

Figure 181. Italian 81-mm HE projectile Model (?).

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**Neg. 502999**

ALL DIMENSIONS IN INCHES

Caliber -----	40 mm	Bursting charge -----	0.18 lb TNT
Identification -----	MK II	Fuze -----	Model MK 1
Type -----	HE-T		point
Weight (fuzed) -----	1.96 lb		detonating
		Known using	
		weapon -----	AA gun Model L/60

Figure 182. Swedish 40-mm HE-T projectile MK II.

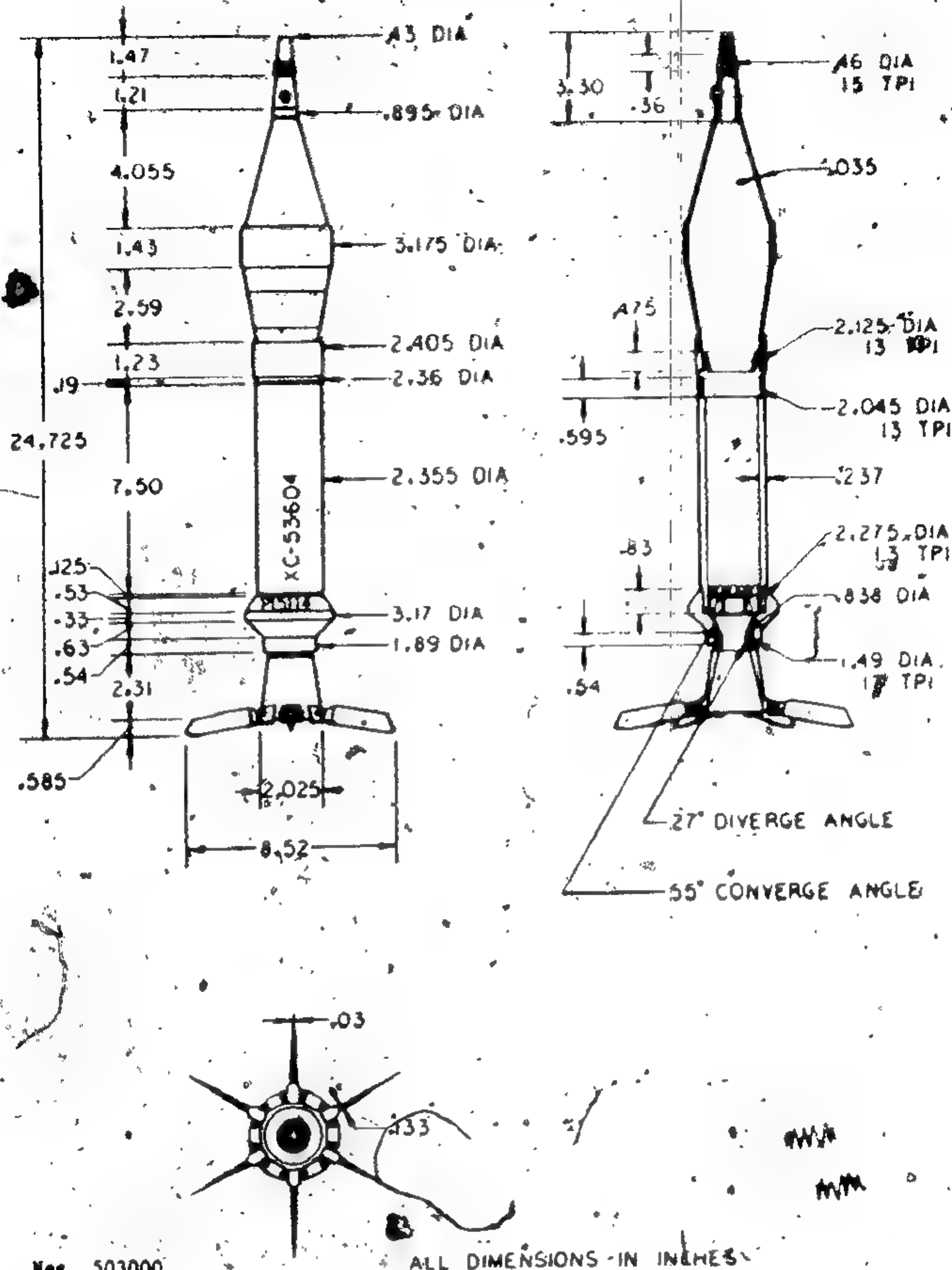
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Neg. 503000

Caliber	80 mm	Fuze	Model 49 PIBD
Identification	49	Known using	
Type	HEAT	weapon	Antitank rocket launcher Model 1951, a sectional view showing the shaped charge liner is not available
Weight (fuzed)	5.98 lb		
Bursting charge	1.32 lb RDX/TNT		

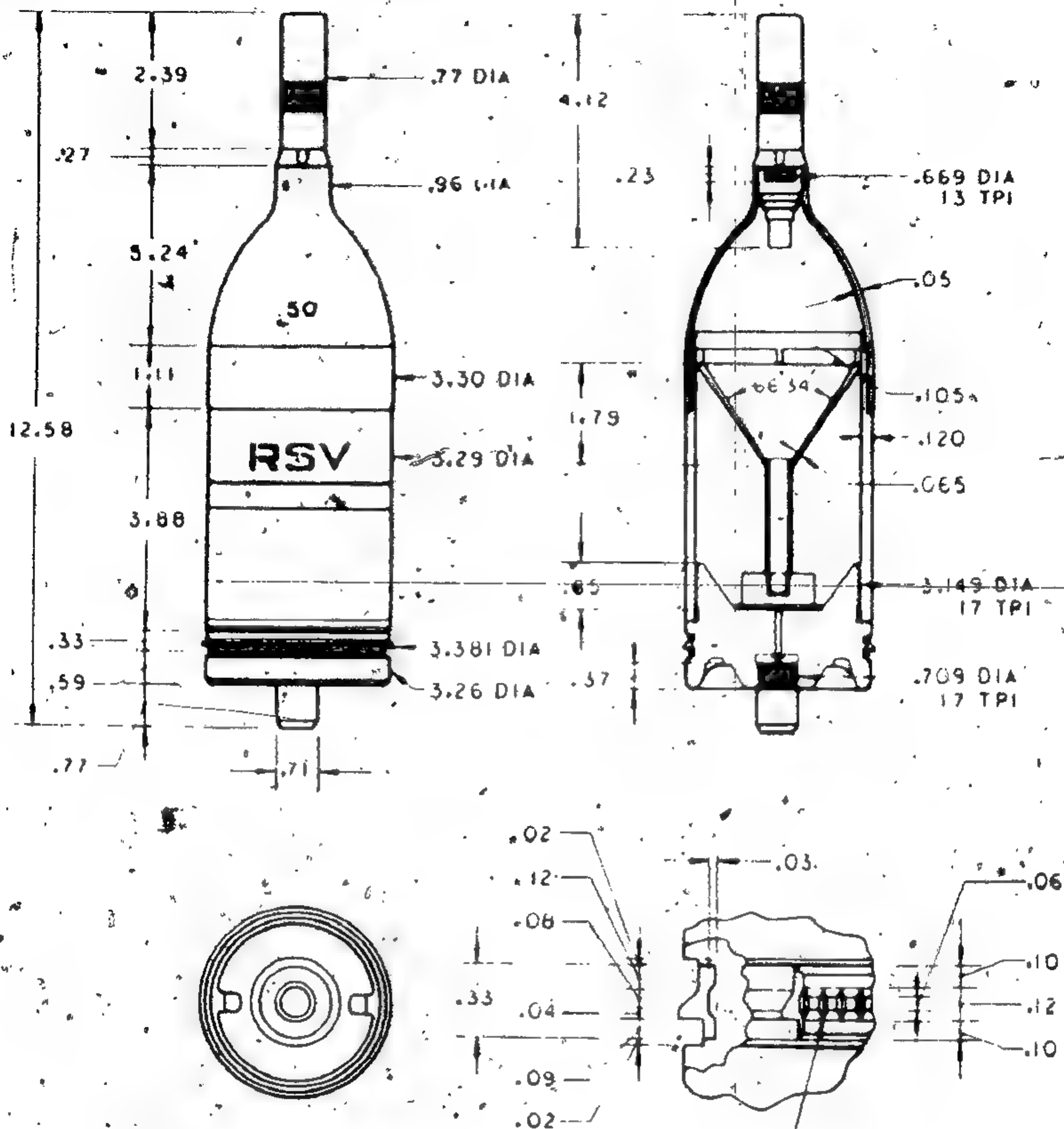
Figure 181. Swedish 80-mm HEAT projectile Model 49.

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Neg. 503001

ALL DIMENSIONS IN INCHES

Caliber	84 mm	Bursting charge	1.30 lb RDX/TNT
Identification	48	Fuze	Model 48 PIBD
Type	HEAT	Known using	
Weight (fuzed)	4.44 lb	weapon	Recoilless rifle Model 48(M2)

Figure 184. Swedish 84-mm HEAT projectile Model 48.

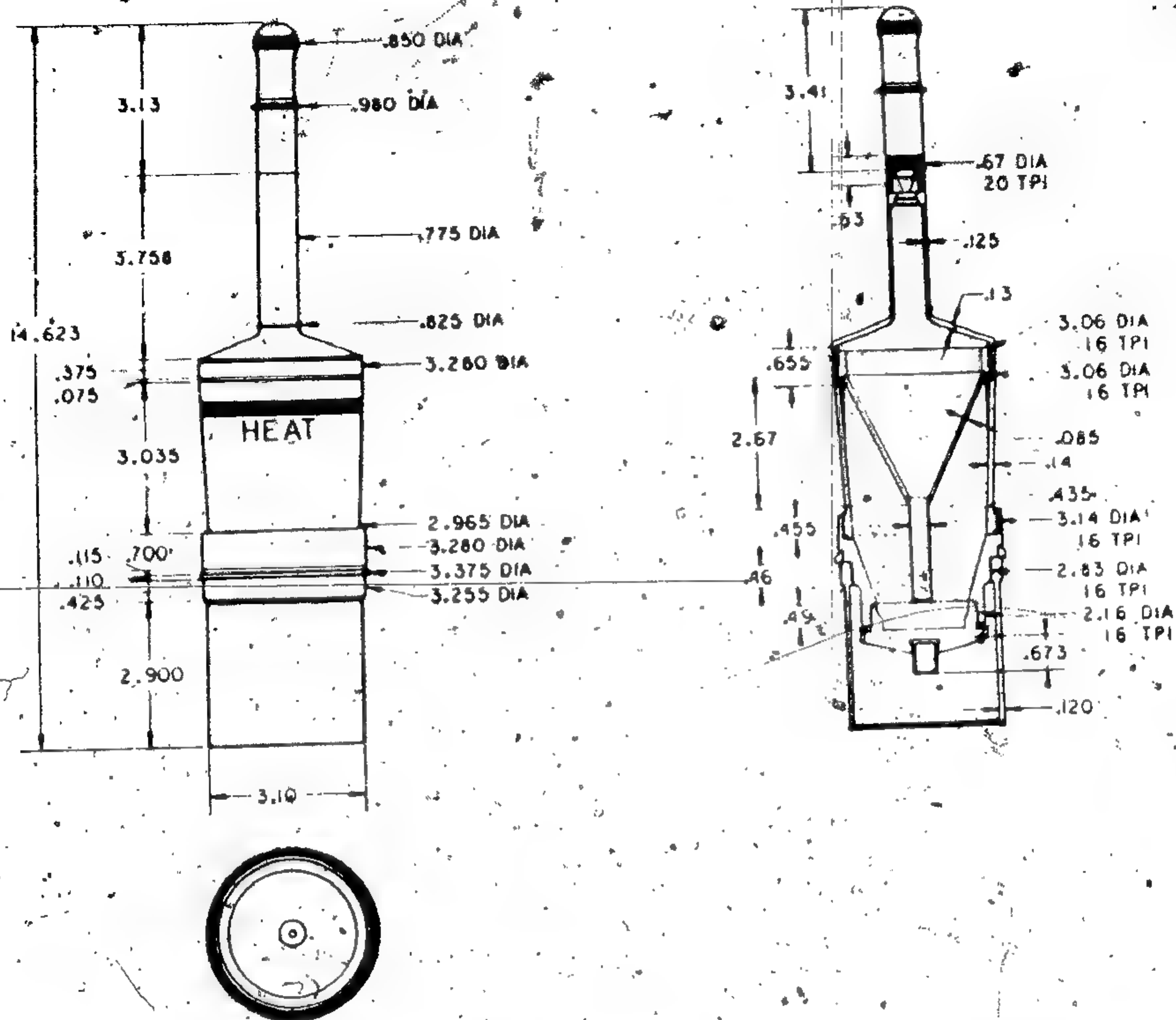
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Original



Neg. 503002

ALL DIMENSIONS IN INCHES

Caliber	84 mm	Bursting charge	1.3 lb RDX/TNT
Identification	59	Fuze	Model (?) PIBD
Type	HEAT	Known using	Recoilless rifle
Weight (fuzed)	3.85 lb	weapon	Model 48 (M2)

Figure 185. Swedish 84-mm HEAT projectile Model 59.

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APPENDIX I.  
CHARACTERISTICS OF FOREIGN WEAPONS

Nomenclature	Max range (m)	Muzzle velocity (m/sec)	Max rate of fire (r/min)	Max eleva- tion (deg)	Max depres- sion (deg)	Max tra- versing (deg)	Number of lands and grooves
USSR							
EURASIAN COMMUNIST COUNTRIES							
37-mm AA gun M1939	6,000 (vert) 8,000 (horiz)	880 frag-T 880 AP-T	160 to 180	85	-5	360	16
37-mm aircraft cannon Model N	—	686 HEI-T 686 AP-T	400 to 440	—	—	—	16
45-mm AT gun M1942	5,000	343 frag 820 AP-T 1,070 HVAP-T	30	25	-8	60	16
50-mm mortar M1940	800	97 frag 97 smoke	30	70	50	12	0
57-mm AT gun M1943	8,400	700 frag 990 frag 1,270 HVAP-T 990 AP-T	20 to 25	25	-5	56	24
57-mm APAT gun	8,400	700 frag 990 AP-T 1,270 HVAP-T 990 AP-T	20 to 25	25	-5	56	24

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Original

## APPENDIX I.


## CHARACTERISTICS OF FOREIGN WEAPONS (Continued)

Nomenclature	Max range (m)	Muzzle velocity (m/sec)	Max rate of fire (r/min)	Max eleva- tion (deg)	Max depres- sion (deg)	Max tra- versing (deg)	Number of lanes and grooves
EURASIAN COMMUNIST COUNTRIES (Continued)							
USSR (Continued)							
57-mm assault gun, ASU-57	8,400	700 frag 980 AP-T 1,255 HVAP-T	8 to 12	12	-5	22	24
57-mm AA gun Model S-60	8,800 (vert) 12,000 (horiz)	1,000 frag-T 1,000 AP-T	105 to 120	87	-4	360	24
Twin 57-mm SP AA gun ZSU-57-2	8,800 (vert) 12,000 (horiz)	1,000 frag-T 1,000 AP-T	210 to 220	85	-5	360	24
76-mm AA guns M1931, M1931/33, and M1938	9,500 (vert) 14,300 (horiz)	812 frag 812 AP-T (?) HVAP-T	15 to 20	82	-3	360	28
76-mm regimental gun (howitzer) M1943	4,200	263 frag-HE 240 HEAT	14	25	-8	60	24
76-mm mountain gun (howitzer) M1938	10,100	495 frag-HE 480 AP-T (?) shrapnel	14	65	-8	10	32

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APPENDIX I.  
CHARACTERISTICS OF FOREIGN WEAPONS (Continued)

Nomenclature	Max range (m)	Muzzle velocity (m/sec)	Max rate of fire (r/min)	Max eleva- tion (deg)	Max depres- sion (deg)	Max tra- versing (deg)	Number of lands and grooves
EURASIAN COMMUNIST COUNTRIES (Continued)							
USSR (Continued)							
76-mm field gun M1939	10,300	705 HE 687 AP-T	5 	45	-6	60	7
76-mm field gun M1942	13,300	680 frag-HE 655 AP-T 950 HVAP-T 325 HEAT	15	37	-5	54	32
76-mm tank PT-76	113,290	680 frag-HE 663 AP-T 966 HVAP-T 325 HEAT	5 to 7	30	-4	360	32
76-mm support gun SU-76	114,214	680 frag-HE 663 AP-T 966 HVAP-T 325 HEAT	8 to 10	25	-5	30	32
40/80-mm AT grenade launcher RPG-2	2100	83 HEAT	4 to 6	—	—	—	0
40/85-mm AT grenade launcher RPG-7	2300 to 500	120 HEAT (boosted to 300)	4 to 6	—	—	—	0

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Original

## APPENDIX I.

## CHARACTERISTICS OF FOREIGN WEAPONS (Continued)

Nomenclature	Max range (m)	Muzzle velocity (m/sec)	Max rate of fire (r/min)	Max eleva- tion (deg)	Max depre- sion (deg)	Max tro- versing (deg)	Number of loading and unloading movements
EURASIAN COMMUNIST COUNTRIES (Continued)							
USSR (Continued)							
82-mm mortar M1937 (1942-43 version)	3,040	210 frag	25	85	45	6	0
82-mm recoilless Gun B-10	4,470	321 frag 321 HEAT	4 to 6	35	-20	360	0
85-mm AA gun M1939 (KS-12 and KS-12A)	10,218 (vert) 15,500 (horiz)	800 frag 800 AP-T 1,030 HVAP-T	15 to 20	82	-3	360	24
85-mm AA gun M1944	11,590 (vert) 18,000 (horiz)	880 frag 880 AP-T 1,030 HVAP-T	15 to 20	82	-3	360	24
85-mm field gun D-44	15,650	800 frag 800 AP-T 1,030 HVAP-T	10	35	-7	54	24
85-mm APAT SD-44	15,650	800 frag 800 AP-T 1,030 HVAP-T	10	35	-7	54	24

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APPENDIX L  
CHARACTERISTICS OF FOREIGN WEAPONS (Continued)

Nomenclature	Max range (m)	Muzzle velocity (m/sec)	Max rate of fire (r/min)	Max eleva- tion (deg)	Max depres- sion (deg)	Max tra- versing (deg)	Number of lands and grooves
EURASIAN COMMUNIST COUNTRIES (Continued)							
USSR (Continued)							
85-mm tank T34/85	15,300	800 frag 805 APC-T 1,050 HVAP-T	8	25	45	360	24
85-mm assault gun SU-85	15,300	800 frag 805 APC-T 1,050 HVAP-T	7 to 8	25	-5	10	24
100-mm AA gun KS-19	14,500 (vert) 21,000 (horiz)	900 HE 900 APC-T	15	87	-3	360	42
100-mm field gun M1955	21,000 (est)	900 frag-HE 900 APC-T 900 HEAT	8	45	-5	60 (est)	(?)
100-mm field gun M1965	18,500 (est)	1,500 APDS 900 HEAT	10	20	-10	54	0
100-mm field (AT) gun M1944	21,000	900 frag-HE 920 AP-T	8 to 10	45	-5	58	40

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## APPENDIX I.

## CHARACTERISTICS OF FOREIGN WEAPONS (Continued)

Nomenclature	Max range (m)	Muzzle velocity (m/sec)	Max rate of fire (r/min)	Max elevation (deg)	Max depression (deg)	Max traversing (deg)	Number of lands and grooves
EURASIAN COMMUNIST COUNTRIES (Continued)							
USSR (Continued)							
100-mm tank T-54 (all)	121,031	900 frag-HE 916 APC-T 900 HEAT 1372 APDS (est)	3 to 7	17	-4	360	40
100-mm tank T-55 (all)	115,000	900 frag-HE 916 APC-T 900 HEAT 1372 APDS (est)	4 to 7	18	-5	360	40
100-mm assault gun SU-100	121,031	900 frag-HE 916 APC-T 900 HEAT 1372 APDS (est)	8 to 10	15	-4	32	40
107-mm mountain pack regimental mortar M1938	6,300	302 frag-HE 263 frag-HE 302 smoke	15	80	80	3	0
107-mm recoilless gun B-11	6,650	400 frag-HE 400 HEAT	4 to 5	45	-10	35	0
115-mm tank T-62	24,000	915 frag-HE 915 HEAT 1615 APDS	4	18	-5	360	0

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## APPENDIX I.

## CHARACTERISTICS OF FOREIGN WEAPONS (Continued)

Nomenclature	Max range (m)	Muzzle velocity (m/sec)	Max rate of fire (r/min)	Max elevation (deg)	Max depression (deg)	Max traversing (deg)	Number of lands and grooves
EURASIAN COMMUNIST COUNTRIES (Continued)							
USSR (Continued)							
120-mm regimental mortars M1938 and M1943	5,700	272 frag-HE ? incend ? smoke	15	60	45	6	0
122-mm tank T-10	21,945	885 frag-HE 885 APC-T	3 to 4	17	-3	360	(?)
122-mm tank T-10M	22,000	915(?) frag-HE 915(?) HEAT 950 APC-T	3 to 4	17	-3	360	(?)
122-mm howitzer M1938 (M-30)	11,800	515 frag-HE 515 HEAT	5 to 6	64	-3	49	36
122-mm field gun M1931/37	20,800	800 frag-HE 800 AP-T 800 CP	5 to 6	65	-2	58	44
122-mm field gun D-74	23,900	885 frag-HE 885 APC-T	6	45	-5	58	28

See Footnote on Page 364.

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## APPENDIX I.

## CHARACTERISTICS OF FOREIGN WEAPONS (Continued)

Nomenclature	Max range (m)	Muzzle velocity (m/sec)	Max rate of fire (r/min)	Max elevation (deg)	Max depression (deg)	Max traversing (deg)	Number of lands and grooves
EURASIAN COMMUNIST COUNTRIES (Continued)							
USSR (Continued)							
122-mm tanks JS-1, JS-2, and JS-3	120, 116	780 frag-HE 800 AP-T	3 to 4	20	-3	360	44
122-mm assault gun JSU-122	120, 800	800 frag-HE 800 AP-T	3 to 6	15	-42	11	44
122-mm assault gun JSU-122A	120, 116	780 frag-HE 895 AP-T	3 to 6	20	-3	20	44
122-mm howitzer D-30	15, 300	690 frag-HE 740 HEAT 690 HEAT-FS	8	70	-7	360	36
122-mm MRL BM-21	20, 500	450 HE ? Chem	40 in less than 1 min	?	—	180	0
130-mm AA gun KS-30	21, 945 (vert) 29, 260 (horiz)	945 HE	10 to 12	80	-5	360	(?)

See Footnotes on Page 364.

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## APPENDIX I:

## CHARACTERISTICS OF FOREIGN WEAPONS (Continued)

Nomenclature	Max range (m)	Muzzle velocity (ft/sec)	Max rate of fire (r/min)	Max elevation (deg)	Max depression (deg)	Max traversing (deg)	Number of lands and grooves
USSR (Continued)							
130-mm field gun M-46	27,000	930 frag-HE 930 APC-T	5 to 6	45	2.5	50	40
132-mm MRL BM-132	9,000	350 HE	16 in less than 1 min	45	15	20	0
140-mm MRLs: BM-14-16 BM-14-17 M1965 (towed)	9,810	402 HE	16 in less 17 than 16 1 min	52 47 48	-1.7 — —	200 210 30	0
152-mm gun-howitzer M1937	17,265	655 frag-HE 600 AP-T 600 CP	4	65	-2	58	48
152-mm Howitzer M1938 (M-10)	12,400	510 frag-HE 510 CP 432 SAP	4	65	-1	50	48
152-mm Howitzer D-1	12,200	510 frag-HE 510 CP 432 SAP	4	63	-3	35	48



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## APPENDIX I.

## CHARACTERISTICS OF FOREIGN WEAPONS (Continued)

Nomenclature	Max range (m)	Muzzle velocity (m/sec)	Max rate of fire (r/min)	Max elevation (deg)	Max depression (deg)	Max traverse (deg)	Number of rounds and recovery
EURASIAN COMMUNIST COUNTRIES (Continued)							
USSR (Continued)							
152-mm gun-howitzer D-20	17,200	655 HE ? AP-T	4	63 (est)	-5 (est)	58	28
152-mm assault gun SU-152	115,850	655 frag-HE 601 AP-T	2 to 3	20	-3	10	48
160-mm mortar M1945	5,000	305 HE	3	85	45	25	0
160-mm mortar M160	8,070	343 HE 343 Frag	3	80	50	24	0
200-mm MRL BM-20	20,000	? HE	4 in less than 1 min	50	-15	10	0
203-mm gun-howitzer M1955	29,250 (est)	792 HE(est) ? CP	1 (est)	50 (est)	-2 (est)	44 (est)	(?)

See footnote on page 364.

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## APPENDIX I.

## CHARACTERISTICS OF FOREIGN WEAPONS (Continued)

Nomenclature	Max range (m)	Muzzle velocity (m/sec)	Max rate of fire (r/min)	Max elevation (deg)	Max depression (deg)	Max traversing (deg)	Number of lands and grooves
USSR (Continued)							
203-mm howitzer M1931 (B-4)	18,025	607 HE 607 CP	1 in 2 min	60	—	8	64
240-mm MRL BM-24	12,000	465 HE	12 in less than 1 min	50	—	140	0
240-mm MRL on AT-S artillery tractor	12,000	465 HE	12 in less than 1 min	45	—	210	0
240-mm mortar M-240	9,700	363 HE	1	80	50	17	0
250-mm MRL BM-25	50,000	? HE	6 in less than 1 min	65	—	10	0
280-mm mortar (howitzer) M1939	10,520	420 HE ? CP	1 every 4 min	60	—	8	88

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## APPENDIX I.

## CHARACTERISTICS OF FOREIGN WEAPONS (Continued)

Nomenclature	Max range (m)	Muzzle velocity (m/sec)	Max rate of fire (r/min)	Max eleva- tion (deg)	Max depres- sion (deg)	Max tra- versing (deg)	Number of lands and grooves
EUROPEAN COMMUNIST COUNTRIES (Continued)							
PEOPLE'S REPUBLIC OF CHINA							
337-mm AA gun Type 55	6,000 (vert) 8,000 (horiz)	880 frag-T 880 AP-T	160 to 180	85	-5	360	16
357-mm AT gun Type 55	8,400	990 Frag 1270 HVAP-T 990 AP-T	20 to 25	25	-5	56	24
357-mm AA gun Type 59	8,800 (vert) 12,000 (horiz)	1,000 frag-T 1,000 AP-T	105 to 120	87	-4	360	24
57-mm recoilless rifle Type 36	3,657	340 HE 340 HEAT	15	12	-	38	24
60-mm mortar Type 31 (1942)	1,530	158 HE	15 to 20	90	40	12	0
70-mm howitzer Type 92 (Japanese origin)	2,800	200 HE ? HEAT	4 to 6	70	-11	4	(?)

See footnotes on page 364.

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## APPENDIX I.

## CHARACTERISTICS OF FOREIGN WEAPONS (Continued)

Nomenclature	Max range (m)	Muzzle velocity (m/sec)	Max rate of fire (r/min)	Max elevation (deg)	Max depression (deg)	Max traversing (deg)	Number of lands and grooves
EURASIAN COMMUNIST COUNTRIES (Continued)							
PEOPLE'S REPUBLIC OF CHINA (Continued)							
75-mm recoilless rifles Type 52 and Type 56	6,675	305 HE 295 HEAT	10	18	-20	360	28
75-mm mountain gun Type 41 (Japanese origin)	10,964	509 HE (?) HEAT	10	40	-18	12	(?)
75-mm mountain gun Type 94 (Japanese origin)	8,230	386 HE (?) APHE	10 to 12	45	-10	40	(?)
75-mm field gun Type 38 (Japanese origin)	11,960	603 HE 7 APHE	10 to 12	43	-8	70	(?)
376-mm field gun Type 54	13,300	680 frag-HE 655 AP-T 950 HVAP-T 325 HEAT	15	37	-5	54	32
340/80-mm AT grenade launcher Type 56	2100	83 HEAT	4 to 6				0

See footnotes on page 364.

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## APPENDIX I.

## CHARACTERISTICS OF FOREIGN WEAPONS (Continued)

Nomenclature	Max range (m)	Muzzle velocity (m/sec)	Max rate of fire (r/min)	Max elevation (deg)	Max depression (deg)	Max traversing (deg)	Number of lands or grooves
EURASIAN COMMUNIST COUNTRIES (Continued)							
PEOPLE'S REPUBLIC OF CHINA (Continued)							
382-mm Mortar Type 53	3,040	211 HE	15	90	40	6	0
82-mm Mortar Type 20	2,737	198 HE	15 to 25	85	40	10	0
82-mm recoilless gun Type 65	3,750	786 HEAT	6 (est)	45	(?)	360	0
340/85-mm AT grenade launcher Type 56	2,300-500	120 HEAT (boosted to 300)	4 to 6	—	—	—	0
385-mm field gun Type 56	15,650	800 frag 800 AP-T 1,030 HVAP-T	10	35	-7	52	24
385-mm lt tank Type 62 and lt amphib tank Type 60/63	15,300	800 frag 805 APC-T 1,050 HVAP-T	8	25	-5	360	24

See footnotes on page 364.

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## APPENDIX I.

## CHARACTERISTICS OF FOREIGN WEAPONS (Continued)

Nomenclature	7 Max range (m)	Muzzle velocity (m/sec)	Max rate of fire (r/min)	Max eleva- tion (deg)	Max depres- sion (deg)	Max tra- versing (deg)	Number of lands and grooves
EURASIAN COMMUNIST COUNTRIES (Continued)							
PEOPLE'S REPUBLIC OF CHINA (Continued)							
87-mm AT Rocket launcher Type 51	183	119 HEAT 93 HEAT	2 to 4	—	—	—	0
3100-mm med tank Type 59	121,031	900 frag-HE 925 AP-T 900 HEAT	4 to 7	17	-4	360	40
3100-mm field gun Type 7	21,000	900 frag-HE 920 AP-T	8 to 10	45	-5	58	40
3100-mm AA gun Type 59	13,500 (vert) 21,000 (horiz)	900 HE 900 APC-T	15	87	-3	360	42
102-mm rocket launcher Type ?	5,760 (?)	286 HE (est)	—	45 (est)	—	20 (est)	0
105-mm howitzer Type 91 (Japanese origin)	11,800	442 HE 546 APHE	6 to 8	45	-5	40	32

See footnotes on page 364.

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## APPENDIX I.

## CHARACTERISTICS OF FOREIGN WEAPONS (Continued)

Nomenclature	Max range (m)	Muzzle velocity (m/sec)	Max rate of fire (r/min)	Max elevation (deg)	Max depression (deg)	Max traversing (deg)	Number of lands and grooves
EURASIAN COMMUNIST COUNTRIES (Continued)							
PEOPLE'S REPUBLIC OF CHINA (Continued)							
105-mm gun Type 92 (Japanese origin)	18,288	762 HE ? AP	6 to 8	45	-5	36	33
107-mm rocket launcher Type 63	8,300	385 HE	12 in less than 1 min	58.2	---	32	0
107-mm MRL Type 63-1	8,300	385 HE	Manual variable	58.5	-3	36	0
120-mm Mortar Type 33	5,470	255 HE	6	85	25	8	0
3122-mm field gun Type 60	23,900	885 frag-HE 885 Prop 885 APC-T	6	45	-5	58	28

See footnote on page 364.

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## APPENDIX I

## CHARACTERISTICS OF FOREIGN WEAPONS (Continued)

CHARACTERISTICS OF FOREIGN WEAPONS							
Nomenclature	Max range (m)	Muzzle velocity (m/sec)	Max rate of fire (r/min)	Max elevation (deg)	Max depression (deg)	Max tra- versing (deg)	Number of lands and grooves
EURASIAN COMMUNIST COUNTRIES (Continued)							
CZECHOSLOVAKIA							
357-mm AT gun PTK-43S	8,400	990 frag 1,270 HVAP 990 AP-T	20 to 25	25	-5	56	24
382-mm Mortar, M1937, M1941 & M1943	3,040	210 HE	25	85	45	10	0
82-mm Mortar M1948	3,700	222 HE	10 (est)	85	45	(7)	0
82-mm recoilless gun T-21	2,800	236 HEAT	4 to 6	—	—	—	0
82-mm recoilless gun M59A	7,560	745 HEAT	6	25	-5	360	0
85-mm field gun M52	16,160	805 NE 820 AP-T 1,062 HVAP-T	10	38	-6	60	24

See footnote on page 364.

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## APPENDIX I.

## CHARACTERISTICS OF FOREIGN WEAPONS (Continued)

Nomenclature	Max range (m)	Muzzle velocity (m/sec)	Max rate of fire (r/min)	Max elevation (deg)	Max depression (deg)	Max traversing (deg)	Number of lands and grooves
EURASIAN COMMUNIST COUNTRIES (Continued)							
CZECHOSLOVAKIA (Continued)							
85-mm AA gun PLK-39	10,218 (vert) 15,500 (horiz)	800 frag 800 AP-T 1,030 HVAP-T	15 to 20	82	-3	360	24
100-mm tank T-54	121,031	930 frag-HE 955 APC-T 995 HEAT	3 to 7	17	-4	360	40
100-mm tank T-55	115,000	930 frag-HE 955 APC-T 995 HEAT	4 to 7	18	-5	360	40
100-mm assault gun SU-100	121,031	930 frag-HE 955 APC-T 995 HEAT	8 to 10	15	-4	32	40
100-mm field gun M1953	21,000	930 frag-HE 955 APC-T 995 HEAT	8 to 10	42	-6	60	40
120-mm Mortar M1948	5,900	255 HE	6	80	45	10	0

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## APPENDIX I.

## CHARACTERISTICS OF FOREIGN WEAPONS (Continued)

Designation	Max. range (m)	Muzzle velocity (m/sec)	Max rate of fire (r/min)	Max elevation (deg)	Max depression (deg)	Max traversing (deg)	Number of lands and grooves
EURASIAN COMMUNIST COUNTRIES (Continued)							
CZECHOSLOVAKIA (Continued)							
120/45-mm AT grenade launcher P-27	2100	140 HEAT	4	—	—	—	0
122-mm MRL 1972	20,500	450 HE	40 in less than 1 min	50	—	240	0
130-mm MRL M51	8,200	415 HE	32 in less than 1 min	50	—	120	0
NORTH VIETNAM							
50/100-mm AT grenade launcher B50	2100	87	4 to 5	—	—	—	0

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## APPENDIX I

## CHARACTERISTICS OF FOREIGN WEAPONS (Continued)

Weapon	Max range (m)	Muzzle velocity (m/sec)	Max rate of fire (r/min)	Max eleva- tion (deg)	Max depres- sion (deg)	Max tra- versing (deg)	Number of lands and grooves
EURASIAN COMMUNIST COUNTRIES (Continued)							
POLAND							
140-mm MRL WP-8 (towed)	9,810	402 HE	8 in less than 9-min	47	—	30	0
YUGOSLAVIA							
76-mm howitzer M1948 (B-1)	8,750	400 HE 400 HEAT	30	45	-15	50	24
82-mm recoilless gun Model 60A	4,000	388 HEAT	4	25	-20	360	0
44/90-mm AT grenade launcher M57	2,200	145 HEAT	5	—	—	—	0
105-mm howitzer M56	13,000	370 HE	18 (est)	82	-12	52	36

See footnote on page 364.

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APPENDIX I  
CHARACTERISTICS OF FOREIGN WEAPONS (Continued)

Nomenclature	Max Range (m)	Muzzle velocity (m/sec)	Max rate of fire (r/min)	Max elevation (deg)	Max depression (deg)	Max tra- versing (deg)	Number of lands and grooves
EUROPEAN COMMUNIST COUNTRIES (Continued)							
YUGOSLAVIA (Continued)							
105-mm recoilless rifle M65	6,000	455 HEAT	6	30	-10	360	12(7)
120-mm Mortar UB M52	6,300	300 HE (lt. rd) ? HE (hvy rd)	25	85	45	6	0
128-mm MRL M68	9,600	420 HE	32 in less than 1 min	48	-1	30	0

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## APPENDIX I.

## CHARACTERISTICS OF FOREIGN WEAPONS (Continued)

Nomenclature	Max range (m)	Muzzle velocity (m/sec)	Max rate of fire (r/min)	Max elevation (deg)	Max depression (deg)	Max tra- versing (deg)	Number of lands and grooves
FREE WORLD COUNTRIES							
BELGIUM							
82-mm AT rocket launcher M1951	2200	180	6				0
CANADA							
76-mm tank M41 (US origin)	19,140	732 HE 1,257 APDS	9 (est)	20	-10	360	28
FEDERAL REPUBLIC OF GERMANY (WEST GERMANY)							
44-mm AT grenade launcher Model 44-1A1	2200	110 HEAT	4				0
160-mm LARS (1st arty rkt launcher)	20,000 +	? HE	36 in less than 1-min	55	0	210	0

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## APPENDIX I.

## CHARACTERISTICS OF FOREIGN WEAPONS (Continued)

CHARACTERISTICS OF FOREIGN WEAPONS (Continued)							
Nomenclature	Max range (m)	Muzzle velocity (m/sec)	Max rate of fire (r/min)	Max eleva- tion (deg)	Max depre- sion (deg)	Max tra- versing (deg)	Number of lands and grooves
FREE WORLD COUNTRIES (Continued)							
FINLAND							
55-mm AT grenade launcher Model 55	2300	160 HEAT	3 to 5	—	—	—	0
60-mm Mortar (Tampella)	2,555	202 HE	25 to 30 (est)	79	40	6.5 to 7.7	0
81-mm Mortar Type A (short tube)	3,980	? HE	15	80	43	5.6	0
81-mm Mortar Type B & C (long tube)	4,660	? HE	15	80	43	5.6	0
95-mm recoilless gun Model 58	6,000	616 HE 616 HEAT	6 to 8	(?)	(?)	(?)	(?)
120-mm light mortar (Tampella)	5,500	(?)	6 (est)	70	45	7.3	0

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## APPENDIX I.

## CHARACTERISTICS OF FOREIGN WEAPONS (Continued)

Nomenclature	Max range (m)	Muzzle velocity (m/sec)	Max rate of fire (r/min)	Max elevation (deg)	Max depression (deg)	Max tra- versing (deg)	Number of lands and grooves
FREE WORLD COUNTRIES (Continued)							
FINLAND (Continued)							
120-mm Mortar (Tampella)	10,000 w/RAP	? HE ? HE-RAP	15	87	39	13.5	0
160-mm Mortar M1953	20,100	? HE 592 HEDS	1 to 2	75	45	360	0
FRANCE							
60-mm Mortar M1935/44	1,760	158 HE ? Illum	18 to 20	83	45	7	0
60-mm Mortar M1963	2,000	? HE	20	85	40	17	0
60-mm Mortar Commando	1,150	? HE	15	---	---	---	0

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## APPENDIX I.

## CHARACTERISTICS OF FOREIGN WEAPONS (Continued)

Nomenclature	Max range (m)	Muzzle velocity (m/sec)	Max rate of fire (r/min)	Max elevation (deg)	Max depression (deg)	Max traversing (deg)	Number of lands and grooves
FREE WORLD COUNTRIES (Continued)							
60-mm Mortar M1961 (turret mounted)	1,600	? HE	10	76	-15	360	0
73-mm rocket launcher M1950	2,183	165 HEAT	4 to 5	---	---	---	0
75-mm tank AMX-13 (Models 51 and 20)	18,000	750 HE 1000 AP-T	14	13	-6	360	32
75-mm Arm'd Recon Vehicle EBR 75	13,200	750 (?) HE 1000 APC-T	20	15	-10	360	(?)
81-mm lt mortar M1961 (long tube)	5,000	300 HE	15	85	30	29	0
81-mm lt mortar M1961 (short tube)	4,140	265 HE	15	85	30	29	0

See footnotes on page 364.

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## APPENDIX I.

## CHARACTERISTICS OF FOREIGN WEAPONS (Continued)

Nomenclature	Max range (m)	Muzzle velocity (m/sec)	Max rate of fire (r/min)	Max elevation (deg)	Max depression (deg)	Max tra- versing (deg)	Number of lands and grooves
FRANCE (Continued)							
89-mm AT rocket launcher STRIM Model FI	2400	300 HEAT	8 (est)	---	---	---	0
90-mm arm'd recon vehicle EBR-90	12,300	640 RE 750 HEAT	(7)	(9)	(7)	360	(7)
90-mm tank ELC Even	12,300	650 RE 800 HEAT	12	13.1	-9.3	360	(7)
105-mm tank AMX-13	12,000	800 HEAT	10	13	-6	360	(7)
105-mm tank AMX-30	10,500	700 RE 1,000 HEAT	10	20	-8	360	32
105-mm howitzer M1950	14,500	579 RE 675 HEAT	6	70	-5	360	32

See footnotes on page 364.

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## CHARACTERISTICS OF FOREIGN WEAPONS (Continued)

Nomenclatures	Max range (m)	Muzzle velocity (m/sec)	Max rate of fire (r/min)	Max eleva- tion (deg)	Max depre- sion (deg)	Max tra- versing (deg)	Number of lands and grooves
FREE WORLD COUNTRIES (Continued)							
FRANCE (Continued)							
105-mm SP howitzers AMX	15,000	600 HE	12 (est)	70 fo- tating: 66 fixed	-7 ro- tating: 40 fixed	360 ro- tating: 40 fixed	(1)
120-mm Mortar AM-49	6,700	290 HE	10	80	45	360	0
120-mm Mortar M1951	6,700	290 HE	10	80	45	45	0
120-mm Lt mortar M1960	9,000	350 HE-RAP	5 to 6	85	40	6	0
120-mm rifled mortar M61R	12,800	375 HE-RAP	10	85	40	14	40
155-mm howitzer M1950	18,000	650 HE	3	70	5	82	48

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## APPENDIX I.

## CHARACTERISTICS OF FOREIGN WEAPONS (Continued)

Nomenclature	Max range (m)	Muzzle velocity (m/sec)	Max rate of fire (r/min)	Max elevation (deg)	Max depression (deg)	Max traversing (deg)	Number of lands and grooves
FRANCE (Continued)							
155-mm SP howitzer AMX	21,600	740 HE	4	67	0	50	48
GERMANY (WW II)							
88-mm AA gun M36	10,600 (vert) 14,860 (horiz)	820 HE	15 to 20	85	-3	360	32
ISRAEL							
52-mm Mortar Solam 2-inch	489	79 HE ? Smoke ? Illum	8	86	-4	40	0
81-mm Mortar MK2 (UK origin)	2,560	192 HE ? Smoke	10	90	45	11	0

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## APPENDIX I.

## CHARACTERISTICS OF FOREIGN WEAPONS, (Continued)

Nomenclature	Max range (m)	Muzzle velocity (m/sec)	Max rate of fire (r/min)	Max elevation (deg)	Max depression (deg)	Max traversing (deg)	Number of lands and grooves
FREE WORLD COUNTRIES (Continued)							
ISRAEL (Continued)							
82-mm rocket launcher Model 19 MKA	2250	215 HEAT 215 Smoke	6	---	---	---	0
88-mm (25 pdr) field gun MK 2 (UK origin)	12,253	448 HE 564 AP-T	5	40	-5	360	26
120-mm Mortar MK 2 (1953) (Soltam)	7,000	328 HE	6 (est)	87	36	6	0
ITALY							
45-mm 1st Mortar Model 35	536	83 HE	30	33	-11	10	0
81-mm Mortar Model 35	4,068	160 HE	16 to 36*	90	40	8 (est)	0

See footnote on page 364.

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Original

## APPENDIX I.

## CHARACTERISTICS OF FOREIGN WEAPONS (Continued)

Nomenclature	Max range (m)	Muzzle velocity (m/sec)	Max rate of fire (r/min)	Max elevation (deg)	Max depression (deg)	Max traversing (deg)	Number of lands and grooves
FREE WORLD COUNTRIES (Continued)							
ITALY (Continued)							
105-mm howitzer M1956	10,200	420 HE	3	65	-5	56	36
120-mm Mortar Cema	5,000	277 HE	5 to 6	88	45	(?)	0
SWEDEN							
40-mm AA gun L/60	6,700 (vert) 9,875 (horiz)	860 HEI-T 880 AP-T	120	90	-6	360	16
40-mm AA gun L/70	4,590 (vert) 12,600 (horiz)	1,000 HE - 1,025 APDS	240	90	-5	360	16
40-mm SP AA gun L/60	6,700 (vert) 9,875 (horiz)	860 HEI-T 880 AP-T	120	80	-7	360	16

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## APPENDIX I.

## CHARACTERISTICS OF FOREIGN WEAPONS (Continued)

Nomenclature	Max range (m)	Muzzle velocity (m/sec)	Max rate of fire (r/min)	Max eleva- tion (deg)	Max depres- sion (deg)	Max tra- versing (deg)	Number of lands and grooves
FREE WORLD COUNTRIES (Continued)							
SWEDEN (Continued)							
57-mm AA gun L/60	7,000 (?) (vert) 14,500 (horiz)	920 HE-T ? APC	120	90	-5	360	24
74-mm ic AT weapon (Miniman)	2250	160 HEAT	1-shot (throwaway)	—	—	—	0
75-mm tank Model 74	(?)	840 (?) AP-T	15 to 20 (?)	15	-15	360	(?)
80-mm AT rocket launcher M51	2150	145 HEAT	6	—	—	—	0
84-mm recoilless rifle M48	2,450	271 HE 311 HEAT 260 Smoke	6	—	—	—	24
90-mm recoilless gun M58	2300	350 HE 750 HEAT	6	15	-15	110	0

See footnote on page 364.

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## APPENDIX I

## CHARACTERISTICS OF FOREIGN WEAPONS (Continued)

Nomenclature	Max range (m)	Muzzle velocity (m/sec)	Max rate of fire (r/min)	Max elevation (deg)	Max depression (deg)	Max traversing (deg)	Number of lands and grooves
FREE WORLD COUNTRIES (Continued)							
SWEDEN (Continued)							
105-mm howitzer L/20	14,600	610 HE	25	65	-5	360	(?)
105-mm SP howitzer IKV-103	10,000	475 HE	5 to 7 (?)	20	-10	20	32
105-mm tank Model "S"	20,000	1,525 APDS	15	11	-11	360	28
155-mm SP gun L/50	25,000	860 HE	15	40	-5	30	(?)

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ST-CW-07-29-74

## CHARACTERISTICS OF FOREIGN WEAPONS (Continued)

Nomenclature	Max range (m)	Max velocity (m/sec)	Max rate of fire (r/min)	Max elevation (deg)	Max depression (deg)	Max traversing (deg)	Number of lands and grooves
FREE WORLD COUNTRIES (Continued)							
SWITZERLAND							
35-mm AA gun Z 41a/353 (twin)	5,754 (vert) 12,400 (horiz)	1,175 HEI-T ? AP-HEI	1,100	92	-5	360	20
81-mm Mortar M13	3,000	670 HE	15 to 20	90	45	150	0
83-mm AT rocket launcher M1950	2,200	200 HEAT 0	6 (est)	—	—	—	0
90-mm AT gun M1950	4,000	600 HEAT	8 to 10	32	-10	66	10
105-mm tank PZ-61A68	12,500	1,174 HEAT 1,478 APDS	8	20	-10	360	28
105-mm howitzer M46	11,590	490 HE	10 to 15	67	-5	72	(?)

See footnotes on page 364.

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## APPENDIX I.

## CHARACTERISTICS OF FOREIGN WEAPONS (Continued)

Nomenclature	Max range (m)	Muzzle velocity (m/sec)	Max rate of fire (r/min)	Max elevation (deg)	Max depression (deg)	Max tra- versing (deg)	Number of lands and grooves
FREE WORLD COUNTRIES (Continued)							
SWITZERLAND (Continued)							
120-mm Mortar M41	5,000	270 HE	5 to 8	90	45	20	0

<sup>1</sup>Maximum range is limited due to elevation capabilities of weapon.<sup>2</sup>Maximum effective range.<sup>3</sup>Weapon is a copy of a Soviet design and can therefore fire domestic and Soviet ammunition interchangeably.<sup>4</sup>Data is based on the Soviet D-74 field gun.

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## APPENDIX II.

## USEFUL CONVERSION TABLES

## A. DECIMALS TO FRACTIONS

[In Inches]

Fraction	Decimal	Fraction	Fraction	Decimal	Fraction
1/64-----	.0156		33/64-----	.5156	
	.0312-----	1/32		.5312-----	17/32
3/64-----	.0468		35/64-----	.5469	
	.0625-----	1/16		.5625-----	9/16
5/64-----	.0781		37/64-----	.5781	
	.0937-----	3/32		.5937-----	19/32
7/64-----	.1094		39/64-----	.6094	
	.125-----	1/8		.625-----	5/8
9/64-----	.1406		41/64-----	.6406	
	.1562-----	5/32		.6562-----	21/32
11/64-----	.1719		43/64-----	.6719	
	.1875-----	3/16		.6875-----	11/16
13/64-----	.2031		45/64-----	.7031	
	.2187-----	7/32		.7187-----	23/32
15/64-----	.2344		47/64-----	.7344	
	.25-----	1/4		.75-----	3/4
17/64-----	.2656		49/64-----	.7656	
	.2812-----	9/32		.7812-----	25/32
19/64-----	.2969		51/64-----	.7968	
	.3125-----	5/16		.8125-----	13/16
21/64-----	.3281		53/64-----	.8281	
	.3437-----	11/32		.8438-----	27/32
23/64-----	.3594		55/64-----	.8594	
	.375-----	3/8		.875-----	7/8
25/64-----	.3906		57/64-----	.8906	
	.4062-----	13/32		.9062-----	29/32
27/64-----	.4219		59/64-----	.9219	
	.4375-----	7/16		.9375-----	15/16
29/64-----	.4531		61/64-----	.9531	
	.4687-----	15/32		.9687-----	31/32
31/64-----	.4844		63/64-----	.9843	
	.5-----	1/2		1.0-----	32/32



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## B. INCHES TO MILLIMETERS

[1 in = 25.4 mm]

Inches	Milli- meters	Inches	Milli- meters	Inches	Milli- meters	Inches	Milli- meters
1-----	25.4	26-----	660.4	51-----	1,295.4	76-----	1,930.4
2-----	50.8	27-----	685.8	52-----	1,320.8	77-----	1,955.8
3-----	76.2	28-----	711.2	53-----	1,346.2	78-----	1,981.2
4-----	101.6	29-----	736.6	54-----	1,371.6	79-----	2,006.6
5-----	127.0	30-----	762.0	55-----	1,397.0	80-----	2,032.0
6-----	152.4	31-----	787.4	56-----	1,422.4	81-----	2,057.4
7-----	177.8	32-----	812.8	57-----	1,447.8	82-----	2,082.8
8-----	203.2	33-----	838.2	58-----	1,473.2	83-----	2,108.2
9-----	228.6	34-----	863.6	59-----	1,498.6	84-----	2,133.6
10-----	254.0	35-----	889.0	60-----	1,524.0	85-----	2,159.0
11-----	279.4	36-----	914.4	61-----	1,549.4	86-----	2,184.4
12-----	304.8	37-----	939.8	62-----	1,574.8	87-----	2,209.8
13-----	330.2	38-----	965.2	63-----	1,600.2	88-----	2,235.2
14-----	355.6	39-----	990.6	64-----	1,625.6	89-----	2,260.6
15-----	381.0	40-----	1,016.0	65-----	1,651.0	90-----	2,286.0
16-----	406.4	41-----	1,041.4	66-----	1,676.4	91-----	2,311.4
17-----	431.8	42-----	1,066.8	67-----	1,701.8	92-----	2,336.8
18-----	457.2	43-----	1,092.2	68-----	1,727.2	93-----	2,362.2
19-----	482.6	44-----	1,117.6	69-----	1,752.6	94-----	2,387.6
20-----	508.0	45-----	1,143.0	70-----	1,778.0	95-----	2,413.0
21-----	533.4	46-----	1,168.4	71-----	1,803.4	96-----	2,438.4
22-----	558.8	47-----	1,193.8	72-----	1,828.8	97-----	2,463.8
23-----	584.2	48-----	1,219.2	73-----	1,854.2	98-----	2,489.2
24-----	609.6	49-----	1,244.6	74-----	1,879.6	99-----	2,514.6
25-----	635.0	50-----	1,270.0	75-----	1,905.0	100-----	2,540.0

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## C. MILLIMETERS TO INCHES

[1 mm = 0.03937 in]

Milli- meters	Inches	Milli- meters	Inches	Milli- meters	Inches	Milli- meters	Inches
1-----	0.03937	26-----	1.02362	51-----	2.00787	76-----	2.99212
2-----	.07874	27-----	1.06299	52-----	2.04724	77-----	3.03149
3-----	.11811	28-----	1.10236	53-----	2.08661	78-----	3.07086
4-----	.15748	29-----	1.14173	54-----	2.12598	79-----	3.11023
5-----	.19685	30-----	1.18110	55-----	2.16535	80-----	3.14960
6-----	.23622	31-----	1.22047	56-----	2.20472	81-----	3.18897
7-----	.27559	32-----	1.25984	57-----	2.24409	82-----	3.22834
8-----	.31496	33-----	1.29921	58-----	2.28346	83-----	3.26771
9-----	.35433	34-----	1.33858	59-----	2.32283	84-----	3.30708
10-----	.39370	35-----	1.37795	60-----	2.36220	85-----	3.34645
11-----	.43307	36-----	1.41732	61-----	2.40157	86-----	3.38582
12-----	.47244	37-----	1.45669	62-----	2.44094	87-----	3.42519
13-----	.51181	38-----	1.49606	63-----	2.48031	88-----	3.46456
14-----	.55118	39-----	1.53543	64-----	2.51968	89-----	3.50393
15-----	.59055	40-----	1.57480	65-----	2.55905	90-----	3.54330
16-----	.62992	41-----	1.61417	66-----	2.59842	91-----	3.58267
17-----	.66929	42-----	1.65354	67-----	2.63779	92-----	3.62204
18-----	.70866	43-----	1.69291	68-----	2.67716	93-----	3.66141
19-----	.74803	44-----	1.73228	69-----	2.71653	94-----	3.70078
20-----	.78740	45-----	1.77165	70-----	2.75590	95-----	3.74015
21-----	.82677	46-----	1.81102	71-----	2.79527	96-----	3.77952
22-----	.86614	47-----	1.85039	72-----	2.83464	97-----	3.81889
23-----	.90551	48-----	1.88976	73-----	2.87401	98-----	3.85826
24-----	.94488	49-----	1.92913	74-----	2.91338	99-----	3.89763
25-----	.98425	50-----	1.96850	75-----	2.95275	100-----	3.93700

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APPENDIX III.

TRANSLITERATION OF RUSSIAN ALPHABET

Russian		English		Russian		English	
А	а	A	a	Р	р	R	r
Б	б	B	b	С	с	S	s
В	в	V	v	Т	т	T	t
Г	г	G	g	У	у	U	u
Д	д	D	d	Ф	ф	F	f
Е	е	Ye, E	ye, e <sup>1</sup>	Х	х	Kh	kh
Ж	ж	Zh	zh	Ц	ц	Ts	ts
З	з	Z	z	Ч	ч	Ch	ch
И	и	I	i	Ш	ш	Sh	sh
Й	й	Y	y	Щ	щ	Shch	shch
К	к	K	k	Ъ	ъ	(")	(')
Л	л	L	l	Ы	ы	Y	y
М	м	M	m	Ь	ь	(')	(')
Н	н	N	n	Э	э	E	e
О	о	O	o	Ю	ю	Yu	yu
П	п	P	p	Я	я	Ya	ya

<sup>1</sup>ye initially, after vowels, and after Ъ, Ь; e elsewhere. When written as е in Russian, translate as ye or e. Use of diacritical marks is preferred, but such marks may be omitted when expediency dictates.

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APPENDIX IV.

GLOSSARIES OF FOREIGN PROJECTILE TERMS

<u>Language</u>	<u>Page</u>
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Original

ALBANIAN

Baj hoka	Canister
Bombe flakse	HE bomb
Bombe nxehse	Incendiary bomb
Ckrej	Fire; discharge
Departmenti i Armëve	Ordnance department
Gremisje	Demolitions
Giyle topi	Shell
Lëndë, luftë	Munitions
Municione	Ammunition

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Original

BULGARIAN

Алуминиев	Aluminum
Амониев	Ammonium
Амонит	Ammonite
Балистичен наконечник	Windshield, ballistic cap
Балистически	Ballistic
Безконтактен	Proximity
Бетон	Concrete
Боев	Live
Бойни припаси	Ammunition
Бомба	Bomb
Бризантен	Brisant
Броня	Armor
Бял	White
Взрив	Explosion; burst
Взривател	Fuze
Взривно вещество	Explosive
Възпламенителен	Incendiary
Вълна	Wave
Газов	Gas
Глава	Nose; head
Година	Year
Граната	Grenade

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Original

BULGARIAN (Continued)

Детонатор	Detonator
Димен	Smoke
Дистанционен взривател	Time fuze
Експериментален	Test; experimental
Желязо	Iron
Завод	Plant; factory
Задържан	Delay
Заряд	Charge
Зона	Zone
Калитра	Round; shot
Изтласкващ заряд	Expelling charge
Калибър	Caliber
Картеч	Canister
Килограм	Kilogram
Корпус	Casing
Нумулативен заряд	Shaped charge
Лачиран	Varnished; lacquered
Маркировка	Code; marking
Меден	Copper
Мелинит	Melinite
Месец	Month
Метал	Metal

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ST-CW-07-29-74

BULGARIAN (Continued)

Мина	Mortar shell
Миномет	Mortar
Минохвъргачка	Mortar
Наконечник	Cap
Незареден	Empty; inert
Нитрат	Nitrate
Обезвреден	Disarmed
Образец	Model
Октол	Octol
Опасно	Danger
Опитен	Test; experimental
Осветителен снаряд	Flare; illuminating shell; star shell
Партия	Lot
Подготовка	Training
Пояс	Band
Пояс на снаряда	Rotating band; driving band
Пластичен	Plastic
Практически	Practice
Предпазител	Safety
Преждевремен	Premature
Противобронен	Antiarmor

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BULGARIAN (Continued)

Пълн	Full
Разривен заряд	Explosive charge
Ракета	Rocket
Ракетивен заряд	Rocket projectile
Рикошет	Ricochet
Сигнален	Signal
Снаряд	Projectile; shell
Стабилизатор	Fin; stabilizer; vane
Стомана	Steel
Тегло	Weight
Тетрил	Tetryl
Трасирац	Tracer
Тринитротолуол	Trinitrotoluene
Тротил	Trotyl; trinitrotoluene
Ударен	Impact
Усилвател на детонатор	Booster
Учебен	Training
Фосфорен	Phosphorus
Фугасен	Demolition; high-explosive
Химически	Chemical; gas
Цвят	Color
Черен барут	Black powder

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BULGARIAN (Continued)

Чувствителен

Sensitive

Чугун

Cast iron

Шрапнел

Shrapnel

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Original

CHINESE

- 一 1
- 二 2
- 三 3
- 四 4
- 五 5
- 六 6
- 七 7
- 八 8
- 九 9
- 十 10
- 十一 11

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CHINESE (Continued)

十二 12

十三 13

二十 20

二十一 21

二十二 22

三十 30

四十 40

一百 100

一百零二 102

一百一十 110

一百一十二 112

一百二十二 122

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ST-CW-07-29-74

Original

CHINESE (Continued)

二百 ----- 200

一千 ----- 1,000

彈藥 ----- Ammunition

杀多 ----- Annihilation

杀 ----- Antipersonnel

杀爆变钢 ----- Antipersonnel HE fragmentation

破甲子彈 ----- Armor-piercing bullet

兵工廠 ----- Arsenal

砲兵 ----- Artillery

彈底信管 ----- Base-detonating fuze

批 ----- Batch, lot

黑火藥 ----- Black powder

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Original

ST-CW-07-29-74

CHINESE (Continued)

黃銅 \_\_\_\_\_ Brass

子彈 \_\_\_\_\_ Bullet

雙用信管 \_\_\_\_\_ Combination fuze

銅 \_\_\_\_\_ Copper

做 \_\_\_\_\_ Copy

立方公分 \_\_\_\_\_ Cubic centimeter

日 \_\_\_\_\_ Day

延 \_\_\_\_\_ Delayed Action (Fire)

炸藥 \_\_\_\_\_ Explosive

工廠 \_\_\_\_\_ Factory

輕放 \_\_\_\_\_ Fragile (no rough handling)

炸爆 \_\_\_\_\_ Fragmentation

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Original

CHINESE. (Continued)

信管 ----- Fuze

總重 ----- Gross weight

輕放 / 小心輕 方 ----- Handle with care

破壞藥 ----- High explosive

曳破 ----- High Explosive Antitank (HEAT)

碰炸信管 ----- Impact fuze

燒夷彈 ----- Incendiary fuze

格 ----- Inspected

瞬發信管 ----- Instantaneous fuze

公斤 ----- Kilograms

變 ----- Modified

防潮 ----- Moisture proof

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CHINESE (Continued)

月 \_\_\_\_\_ Month

迫擊炮彈 \_\_\_\_\_ Mortar shell

瞬 \_\_\_\_\_ Nondelay

一枚 \_\_\_\_\_ One unit

銑 \_\_\_\_\_ Pig iron

彈頭信管 \_\_\_\_\_ Point-detonating fuze

彈頭 \_\_\_\_\_ Point; nose (of projectile)

彈頭 \_\_\_\_\_ Projectile

火箭 \_\_\_\_\_ Rocket

破 \_\_\_\_\_ Shaped charge

炮彈 \_\_\_\_\_ Shell

短時延期信管 \_\_\_\_\_ Short-delay fuze

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Original

CHINESE (Continued)

榴霰彈 \_\_\_\_\_ Shrapnel

煙藥彈 \_\_\_\_\_ Smoke shell

鋼 \_\_\_\_\_ Steel

定時信管 \_\_\_\_\_ Time fuze

梯恩梯 / 茶褐火藥 \_\_\_\_\_ TNT

曳光彈 \_\_\_\_\_ Tracer bullet

梯萘 \_\_\_\_\_ Trinitronaphthalene

式 \_\_\_\_\_ Type

體積 \_\_\_\_\_ Volume

年 \_\_\_\_\_ Year

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## CZECHOSLOVAK

Amatol	Amatol
Amonium	Ammonium
Armáda	Army
Arsenál	Arsenal
Barva	Color
Balistická čepice	Ballistic cap; windshield
Balistický	Ballistic
Beton	Concrete
Bílý	White
Brisance	Brisance
Citlivý	Sensitive
Cvičení	Practice; training
Cvičný	Blank; training
Časovací přístroj	Fuze setter
Časový	Time
Čepice	Cap
Černý prach	Black powder
Červený	Red
Dutina	Cavity
Dým	Smoke
Fosfor	Phosphorus
Granát	Shell



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CZECHOSLOVAK (Continued)

Hlavový	Nose
Hliníkový	Aluminum
Chemický	Chemical
Index	Code
Interní	Inert
Jádro	Core
Krátký	Short
Kužel	Cone
Litina	Cast iron
Měď	Copper
Melinit	Melinite
Měsíc	Month
Mina	Mortar shell
Minomet	Mortar
Monoblok	Monobloc
Munice	Ammunition
Náboj	Round
Nábojnice	Casing
Nápln	Charge; filler
Nárazový	Impact
Obroučka	Band
Ocel	Steel

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ST-CW-07-29-74

CZECHOSLOVAK (Continued)

OCC	-----	Live shell with combination fuze (abbr.)
Okamžitý	-----	Instantaneous
OMC	-----	Live shell with base detonating fuze (abbr.)
ONG	-----	Live shell with impact fuze (abbr.)
Ostrý	-----	Live
Pásmo	-----	Zone
Plastický	-----	Plastic
Plná náplň	-----	Full charge
Plyn	-----	Gas
Pojistka	-----	Safety
Protipancéřový	-----	Antiarmor
Protitankový	-----	Antitank
Prubojný	-----	Armor-piercing
Prubojný a tvrzeným jádrem	-----	Armor-piercing with special core
Prubojný zápalný	-----	Armor-piercing incendiary
Předčasný	-----	Premature
Puma	-----	Bomb
Raketa	-----	Rocket

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CZECHOSLOVAK (Continued)

Rána	Round
Ráz	Caliber
Rok	Year
Rozbuška	Detonator
Série laborace	Lot
Signál	Signal
Signální náboj	Signal cartridge
Stopovka	Tracer
Střela	Projectile; bullet
Střelivo	Ammunition
Střepina	Fragment
Svitici	Tracer
Svitici střela	Star
Skolní	Dummy; training
Srapnel	Shrapnel
Terčový	Target
Tetryl	Tetryl
Těžký	Heavy
Trhavina	Explosive
Trhavý	High explosive
Trinitrotoluen	Trinitrotoluene; TNT
Váha	Weight

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SI-CW-07-29-74

Original

CZECHOSLOVAK (Continued)

Vlna	Wave
Vodící obroučka	Rotating band
Výroba	Manufacture
Vzor (Vz)	Model
Zápalný	Incendiary
Zápalovač	Fuze
Zastrelovací	Observation; incendiary ranging
Závod	Factory
Zážehovač	Igniter
Zpozd'ovač	Delay

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ST-CW-07-29-74

Original

FRENCH

Acier-----	Steel
A forte vitesse-----	High velocity
Ailette-----	Vane
Aluminium-----	Aluminum
Ammonium-----	Ammonium
An, année-----	Year
Anti-béton-----	Concrete piercing
Antichar-----	Antitank
Antipersonnel-----	Antipersonnel
Armement-----	Arming
Balistique-----	Ballistic
Balle lumineuse-----	Star shell
Balle traceuse, balle tracante-----	Tracer
Bague obturatrice-----	Obturator band
Béton-----	Concrete
Blanc-----	White
Blindage-----	Armor
Boite-----	Casing
Bombe-----	Bomb
Boulet d'epreuve-----	Proof shot
Brisance-----	Brisance
Brisant-----	High explosive

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## FRENCH (Continued)

Calibre	Caliber
Cannelure	Cannelure
Ceinture	Rotating band
Ceinture	Driving band
Chanfrein de culot	Boattail
Charge	Charge
Charge creuse	Shaped charge
Charge d'amorage	Booster
Chimique	Chemical
Corps solide	Rigid body
Couleur	Color
Coup	Round
Coup d'epreuve	Test round
Ou retreint de culot	Streamline base
Cuivre	Copper
Culot	Tail
Danger	Danger
De calibre réduit	Subcaliber
Démolition	Demolition
Désarmer	Disarm
Détonateur	Detonator
Dispositif de sûreté	Safety



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ST-CW-07-29-74

Original

FRENCH (Continued)

Eclairan	-----	Illuminating
Eclat	-----	Fragment
Eclatement	-----	Burst
(Empennagé) ailette	-----	(Fin assembly) Fin
Épreuve, essai	-----	Test
Explosif	-----	Explosive
Fléchette	-----	Flechette
Fonte affinée	-----	Cast iron
Fumigène	-----	Smoke
Fusée	-----	Fuze
Fusée à temps	-----	Time fuze
Fusée de Culot	-----	Base detonating fuze
Fusée, roquette	-----	Rocket
Gaz	-----	Gas
Verbe	-----	Flash
Grenade	-----	Grenade
Hexachlorethane	-----	Hexachloroethane
Incendiaire	-----	Incendiary
Instantané	-----	Instantaneous
Lot	-----	Lot
Mécanique à temps	-----	Mechanical time
Mécanique à temps et instantanée	-----	Mechanical time and superquick

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Original

ST-CW-07-29-74

FRENCH (Continued)

Mélinite	Melinite
Modèle	Model
Mois	Month
Mortier	Mortar
Munition	Ammunition
Nitrate	Nitrate
Noyau	Core
Obus	Shell
Obus à balles	Shrapnel
Ogive	Ogive, nose
Fusée percutante de tête	Nose fuze
Percuteur	Igniter
Perforer	Pierce
Phosphore	Phosphorus
Plastique	Plastic
Poudre noire	Black powder
Prématuré	Premature
Projectile	Projectile
Proximité	Proximity
Raser	Graze
Rayé	Fluted
Retard	Delay

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ST-CW-07-29-74

Original

FRENCH (Continued)

Ricochet	Ricochet
Rotation	Spin
Sabot	Sabot
Sensible	Sensitive
Stabilisant	Stabilizer
Tempage (ou event)	Fuze setting
Tetryl	Tetryl
Tri-nitrotoluène	Trinitrotoluene
Usine (fabriqué à)	Factory (manufactured at)
Zone de tir	Zone of fire

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Original

ST-CW-07-29-74

GERMAN

Beobachtungspatrone	-----	Incendiary ranging cartridge
Brand	-----	Incendiary
Brandsprenggranate mit Leuchtspur		
(Br. Sprgr. L'spur)	-----	High explosive incendiary tracer shell
Brandwirkend	-----	Incendiary
Brisanzgranate	-----	High-explosive shell
Bruttogewicht	-----	Gross weight
Fabrik	-----	Factory; plant
Für Abpraller	-----	For ricochet
Für Schiessen	-----	For firing
Gefahr; Sprengstoff	-----	Danger; explosives!
Geprüft	-----	Inspected
Geschoss	-----	Projectile without explosive filling or fuze
Geschoss mit Leuchtspur	-----	Weight
Granate	-----	Projectile; shell with explosive and fuze
Granate... (Beton (Gr. ... BE)	-----	Concrete-piercing shell
Granate B... Betonbrechende	-----	Concrete-piercing shell
Granate... Hohlladung (Gr. .... HL)	-----	Shaped charge
Grundladung	-----	Base charge
Gusseisen	-----	Cast iron
Hartkern	-----	Special core (often tungsten carbide)
Hohlladung (HL)	-----	Hollow charge; high-explosive antitank (HEAT), shaped charge

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ST-CW-07-29-74

Original

GERMAN (Continued)

Kampfstoff	Chemical warfare agent (gas)
Kartätsche	Canister
Kartusche	Charge; propellant charge with container
Kenzeichnung	Code; designation
Kilogramm (Kg.)	Kilogram
Ladung	Charge
Lakiert	Varnished; lacquered
Leuchtgranate	Illuminating shell
Leuchtpatrone	Signal cartridge
Leuchtspur	Tracer
Lieferung	Lot
Luftdicht verschlossen	Hermetically sealed
Marine	Naval
Mit Zünder	Fuzed
Modell	Model
Nebel	Smoke
Panzer	Tank; armor
Panzergranate (Pzgr.)	Armor-piercing shell
Panzergranate 40 (Pzgr. 40)	HVAP; subcaliber (arrow head)
Patrone	Fixed artillery round; small arms cartridge; round
Pfeilgeschoss	Fin stabilized discarding sabot artillery projectiles

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ST-CW-07-29-74

Original

GERMAN (Continued)

Propaganda	-----	Propaganda
Propagandagranate	-----	Propaganda shell
Raketengeschoß	-----	Rocket projectile
Satz	-----	Piece; item; unit; kit
Schrapnell	-----	Shrapnel
Schuss	-----	Rounds (ammunition); complete round
Spitzgeschoss	-----	Pointed bullet
Splittergranate	-----	Fragmentation shell
Sprenggranate (Sprgr.)	-----	High-explosive shell
Sprenggranate mit Leuchtspur		
(Sprgr. L'spur)	-----	High-explosive tracer shell
Sprengstoff	-----	High-explosive
Stahl	-----	Steel
Stahlguss	-----	Cast steel
Stück	-----	Piece; item; unit
Untersucht	-----	Examined
Werk	-----	Plant; factory
Werkzeugpatrone	-----	Control cartridge (testing cartridge)
Wurfgranate	-----	Mortar shell; rocket projectile
Wurfkörper	-----	Rocket projectile
Zünder	-----	Fuze

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Original

ST-CW-07-29-74

HEBREW

דגם

דחוס

הקסה ה

הקסוגן

זרחן לבן

ח.נ. ב

ט.נ.ט

יעוק

ירי

ל... עם

מהירות הלוע

מ"מ

מס

מעקר

מפוקק

מצנח

מרעום

מרעום הקשה מרעום קרבה

משר התאורה

נותר

נ"ט (נגד טנקים)

נפיץ

Model

Compressed

Hexa. H

Hexogen

White phosphorous

Composition B

TNT

Cast

Shot

With

Muzzle velocity

Millimeters

Number

Inert

Plugged

Parachute

Fuze

Impact fuze

Illumination time

Tracer

Antitank

H.E.

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Original

ST-CW-07-29-74

HEBREW (Continued)

נרות	Candles
סדרה	Lot
סימן	Mark
עצמת האור	Candle power
עשן	Smoke
עשן אפור	Gray smoke
עשן זרימה	Flowing smoke
עשן מחפ רצף	Bursting cover smoke
פאונד	Pound
פגז	Shell
פלסט	Plastic
פצצה	Bomb
פצצה ממוקד	Launcher bomb
קוד	Code
תאורה	Illumination
תחל	Primer

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ST-CW-07-29-74

Original

HUNGARIAN

Abrons	Band
Acélmagvas	Armor piercing
Aknagránát	Mortar shell
Aknavető	Mortar
Alumínium	Aluminum
Amatol	Amatol
Amónia	Ammonium
Atüt	To pierce
Becsapódás	Impact
Bevágás	Cannelure
Bomba	Bomb
Céllövő töltény	Target cartridge
Detonátor	Booster
Eles	Live
Fadugós oktató töltény	Dummy cartridge
Fenekgyújtó	Base fuze
Fényjelzős lövedék	Tracer projectile
Gáz	Gas
Gránát	Shell; grenade
Cyakorló lőszer	Practice ammunition
Cyár	Factory
Cyújtó (szerkezet)	Fuze (system.)

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Original

ST-CW-07-29-74

HUNGARIAN (Continued)

Gyújtógránát	Incendiary shell
Időzített	Time
Iskola	Training
Jelző	Signal
Kaliber	Caliber
Kantács	Canister
Kémiai	Chemical
Kiképzés	Training
Ködgránát	Smoke shell
Lőpor	Gunpowder
Lőszer	Ammunition
Lőszerfajta	Type of ammunition
Lövedék	Projectile, bullet
Lövés	Shot
M.	Model (abbr.)
Minta	Model
Nyomjelzős lövedék	Tracer projectile
Páncél	Armor
Páncélgránát	Armor piercing (shell)
Páncéltörő	Antitank
Páncélzat	Armor plate

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ST-CW-07-29-74

Original

HUNGARIAN (Continued)

Pillanatgyújtó-----	Instantaneous fuze
Rakéta-----	Flare
Repeszdarab-----	Fragment
Repeszgránát-----	High explosive
Robbanóanyag-----	Explosive
Rombolás-----	Demolition
Rövid-----	Short
Tetril-----	Tetryl
Tipus-----	Type
Töltény-----	Cartridge
Töltet-----	Charge
Trinitrotoluol-----	TNT
Tűz-----	Flash
Vaktöltény-----	Blank cartridge
Veszély-----	Danger
Vezető abroncs-----	Rotating band
Világító lövedék-----	Star shell
Zóna-----	Zone

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Original

SI-CW, 07-29-74

KOREAN

탄약 ----- Ammunition

고리홈 ----- Annular groove

파괴소위탄환 ----- Armor-piercing incendiary

철갑탄 ----- Armor-piercing shell

조병창 ----- Arsenal

태포탄 ----- Artillery shell

보통실포 ----- Ball ammunition

랭저신판 ----- Base fuze

점포약 ----- Booster charge

탄환 ----- Bullet

구경 ----- Caliber

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ST-CW-07-29-74

Original

KOREAN (Continued)

플로후가

Cap; head; nose; point

꽃

Color

복동신관

Combination fuze

공용탄

Common shell

파괴포탄

Demolition shell

폭발탄

Explosive bullet

기폭약

Explosive bursting charge

폭발물

Explosives

공장

Factory

신관

Fuze

지뢰파편류탄

HE fragmentation shell

고폭약

High explosive

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Original

ST-CW-07-29-74

KOREAN (Continued)

원추공간  
장전탄

Hollow-charge shell

조이탄

Incendiary shell

순발신포

Instantaneous fuze

철심

Iron core; iron core bolt

대구경탄

Large caliber shell

장구리탄

Long pointed shell

모형

Model

수정

Modification

월

Month

박격포

Mortar

박격포탄

Mortar shell

탄알

Projectile

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ST-CW-07-29-74

Original

KOREAN (Continued)

환 ----- Ring; collar

자주포 ----- Rocket

발사 ----- Rounds

포탄 ----- Shell

탄연기신관 ----- Short-delay fuze

산탄 ----- Shrapnel

연막탄 ----- Smoke shell

특별탄 ----- Special shell

시한신관 ----- Time fuze

살화 ----- To ignite

티엔티 ----- TNT

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Original

ST-CV-07-29-74

KOREAN (Continued)

에 광 탄

Tracer bullet

형 세

Type

연

Year



7

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ST-CW-07-29-74

Original

## POLISH

Aluminium	Aluminum
Amatol	Amatol
Amonowy	Ammonium
Amunicja	Ammunition
Azotan	Nitrate
Balistyczny	Ballistic
Barwa	Color
Beton	Concrete
Biały	White
Bomba	Bomb
Bomba burząca	Demolition bomb
Bomba dymna	Smoke bomb
Bomba odłamkowa	Fragmentation bomb
Bomba oświetlająca	Flare
Bomba zapalająca	Incendiary bomb
Brzechwa	Fin
Burzący	High explosive
Chemiczny	Chemical
CieŜar	Weight
Cyklonit	Cyclonite
Czasowy	Time
Czepiec	Cap

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POLISH (Continued)

Czepiec balistyczny	Ballistic cap; windshield
Ćwiczebny	Practice
Detonator	Detonator
Doświadczalny	Test
Duża prędkość początkowa	High speed
Dym	Smoke
Fala	Wave
Fosforowy	Phosphorus
Gaz	Gas
Głowica bojowa	Warhead
Granat	Grenade
Gwiazdka oświetlająca	Star
Heksogen	Cyclonite
Jednolity	Monobloc
Kadłub	Jacket
Kaliber	Caliber
Kartacz	Canister
Kruszność	Brisance
Ładunek	Charge
Ładunek kumulacyjny	Shaped charge
Ładunek wewnętrzny	Filler
Ładunek wyrzucający	Expelling charge



# UNCLASSIFIED

ST-CW-07-29-74

Original

## POLISH (Continued)

Materiał wybuchowy	Explosive
Melinir	Melinite
Melinieu D	Explosive D
Miedź	Copper
Miesiąc	Month
Moździerz	Mortar
MW	Explosive(s) (abbr.)
Nabój	Round
Natychmiastowy	Instantaneous
Niebezpiecznik	Danger
Nos	Nose
Obojętny	Inert
Odlamek	Fragment
Odprysk	Spall
Oktol	Octol
Oświetlający	Illuminating
Pancerny	Armor-piercing
Pancerz	Armor
Partia	Lot
Pentolit	Pentolite
Perchloroetan	Hexachloroethane
Pierścień	Band

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# UNCLASSIFIED

Original

ST-CW-07-29-74

## POLISH (Continued)

Pierścień wiodący	Driving band; rotating band
Plastyczny	Plastic
Plaszcz	Jacket
Płomień	Flash
Pobudzac	Initiator
Pocisk	Shell; projectile; missile
Podkalibrowy	Subcaliber
Proch czarny	Black powder
Przeciwczołgowy	Antitank
Przeciwpancerny	Armor-piercing
Przeciwpiechotny	Antipersonnel
Przedwczesny	Premature
Przybitka	Closing cup
Pusty	Empty
Rakieta	Rocket
Rakieta sygnałowa	Signal cartridge
Rdzeń	Core
Rok	Year
Rowek do obciśnięcia łuski	Cannelure
Rozbrajać	To disarm

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ST-CW-07-29-74

Original

POLISH (Continued)

Rykoszet	Ricochet
Signalowy	Signal
Skorupa	Casing, body
Smugowy	Tracer
Spłonka	Detonator
Spłonka pobudzająca	Igniter
Stabilizowany za pomocą ruchu obrotowego	Spin stabilized
Stal	Steel
Strefa	Zone
Strumień	Jet
Strzał bezwzględny	Grazing shot
Strzał odbitkowy	Ricochet
Sygnatowy	Signal cartridge
Sześciochloroetan	Hexachloroethane
Szkolny	Training
Szrapnel	Shrapnel
Tetryl	Tetryl
Trotyl	TNT
Uderzeniowy	Impact
Ulotka	Leaflet
Urządzenie zabezpieczające	Safety
Uzbrajać	To arm

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Original

ST-CW-07-29-74

## POLISH (Continued)

Wgłębienie	Cavity
Wkładka kumulacyjna	Liner
Wkrętka pobudzająca	Booster
Wrażliwy	Sensitive
Wytwórnia	Factory
Wzór	Model
Zapalający	Incendiary
Zapalnik	Fuze
Zapalnik uderzeniowy	Impact fuze
Zbliżeniowy	Proximity
Zgrubienie środkujące	Bourrelet
Znakowanie	Code
Znak wytwórni	Manufacturer's identification
Zwłoka	Delay
Żeliwo	Cast iron

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ST-CW-07-29-74

Original

RUMANIAN

Armarie	Arsenal
Armatura	Armament
Bombă	Bomb
Bucăți	Rounds; pieces
Dărâmtură	Demolition
Glont	Bullet
Model	Model
Mortieră	Mortar
Munitiune	Ammunition
Proiectil	Projectile; missile

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Original

ST/CW-07-29-74

RUSSIAN

Агитационный снаряд	Propaganda shell; leaflet shell
Алюминиевый	Aluminum
Аммонит	Ammonite
Амотол	Amatol
Баллистический	Ballistic
Баллистический наконечник	Windshield; ballistic cap
Белый	White
Бесконтактный взрыватель	Proximity fuze
Беспламенный	Flashless
Бетон	Concrete
Бетонобойный	Concrete-piercing
Боевой	Live
Боевые припасы	Ammunition
Бомба	Bomb
Бризантность	Brisance
Бронебойный	Armor-piercing
Броня	Armor
Брутто	Gross weight
Ведущий пояс	Rotating band; driving band
Вес	Weight
Взведенный	Armed
Взрыв	Explosion; burst

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ST-CW-07-29-74

Original

RUSSIAN (Continued)

Взрыватель	Fuze
Взрыватель внешнего возбуждения	Proximity fuze
Взрывчатое вещество (ВВ)	Explosive
Волна	Wave
Воронка	Cone; liner
Воспламенитель	Initiator
Восстановленный	Restored; renovated
Выстрел	Round; shot
Вышибной заряд	Expelling charge
Газ	Gas
Год	Year
Головная часть снаряда	Projectile head (ogive)
Головное зарядное отделение	Warhead
Гексахлорэтан	Hexachloroethane
Граната	Grenade; shell
Детонатор	Detonator
Дистанционная трубка	Time fuze
Дульное пламя	Flash
Дымовой	Smoke
Железо	Iron
Желобчатый	Fluted
Завод	Plant; factory

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Original

ST-CW-07-29-74

RUSSIAN (Continued)

Зажигательный	Incendiary
Зажигательный пристрелочный	Incendiary ranging
Залакированный	Varnished; lacquered
Замедление	Delay
Запалник	Igniter
Заряд	Charge
Зона	Zone
Индекс (инд)	Index; code
Калибр	Caliber
Картель	Canister
Ковка	Forging
Кольцевая канавка	Cannelure
Коническая заплечная часть	Boattail
Корпус	Casing
Корпус снаряда	Body of projectile
крыло стабилизатора	Stabilizer; fin, vane
Кумулятивный бронепрожигающий	High explosive antitank
Кумулятивный заряд	Shaped charge
Кумулятивный снаряд	Shaped-charge shell
Листовая сталь	Sheet steel
Литая сталь	Cast steel
Марка	Mark; stamp

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ST-CW-07-29-74

Original

## RUSSIAN (Continued)

Маркировка	Code; marking
Мгновенный	Instantaneous
Мелинит	Melinite
Месяц	Month
Металл	Metal
Мина	Mortar shell
Миномет	Mortar
Надзор	Inspection
Наконечник	Cap
Наполнение заливанием	Cast loading
Наполнение прессованием	Press loading
На ricochet	For ricochet
Незаряженный	Inert; empty
Нитрат	Nitrate
Обезвреживать	Disarm
Образец (обр.)	Model
окончательный снаряженный (ок. сна., ок. снар.)	Fuzed
Октол	Octol
Опасно вз	Danger! Explosives
Опытный	Experimental; test
Осветительный	Illuminating

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Original

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## RUSSIAN (Continued)

Осветительный снаряд	Flare; illuminating shell; star shell
Осколок	Fragment
Осколочный (оск., оско.)	Fragmentation; antipersonnel
Осмотрено	Inspected
Основной пакет	Base charge
От ремонта (от ремон.)	Reworked
Партия (парт.)	Lot
Пентолит	Pentolite
Переупорна	Repacking
Плавить	To smelt
Пластический	Plastic
Повышенная начальная скорость	High velocity
Поддон	Sabot
Подкалиберный	Subcaliber (arrowhead)
Подрывной	Demolition
Полный	Full
Полоса	Zone
Полость	Cavity
Поясок	Band
Практический	Practice
Предохранитель	Safety
Преждевременный	Premature

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**UNCLASSIFIED**

ST-CW-07-29-74

Original

RUSSIAN (Continued)

Просмотрено (просмотр.)	Examined
Противопехотный	Antipersonnel
Противотанковый	Antitank
Пулевая шрапнель	Ball shrapnel
Раздробиться	To shatter
Ракета	Rocket
Ракетный снаряд	Rocket projectile
Реставрированный	Renovated
Рикошет	Ricochet
Сердечник	Core
Сигнальный	Signal
Снаряд	Projectile; shell
Специальный сердечник	Special core
Сплочной	Monobloc, continuous
Стабилизатор	Fin; stabilizer; vane
Стабилизация вращением	Spin-stabilization
Сталь	Steel
Стержневая шрапнель	Bar shrapnel
Стрельба по площадям	Zone fire
Тетрил	Tetryl
Тетритол	Tetrytol
Трассирующий	Tracer

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Original

ST-CW-07-29-74

RUSSIAN (Continued)

Тринитротолуол	Trinitrotoluene
Тритонал	Tritonal
Тротил	Trinitrotoluene; trotyl
Трубка	Fuze; tube; pipe
Ударный	Impact
Усилитель детонатора	Booster
Учебный	Training
Фосфор	Phosphorus
Фугасный	High explosive
Химический	Chemical; gas
Цвет	Color
Центрующий поясok	Bourette
Циклонит	Cyclonite
Черный порох	Black powder
Чувствительный	Sensitive
Чугун	Cast iron
Шнейдерит	Schneiderite
Шрапнель	Shrapnel
Штук (шт.)	Piece; item; unit.
Экспериментальный	Experimental; test

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SWEDISH

Ammunition	Ammunition
Bottenanslagsrör	Base-detonating fuze
Betonggranat	Concrete shell
Basperkussionsrör	Base-percussion fuze
Brandladdning	Incendiary charge
Brandprojektil	Incendiary projectile
Brandspränggranat	Incendiary HE shell
Delladdning	Divided charge; increment; booster charge
Detonator	Detonator
Fördröjt, --jning	Delayed; delaying; delayed action
Fördröjningsbaisad	Delaying shattering
Försöksmodell	Experimental model
Granat	Shell or grenade
Granatkartesch	Shrapnel
Granatmina	Shell mine
Högkänslig	Supersensitive
Känslight	Sensitive; superquick
Kaliber	Caliber
Konladdning	Cone charge
Kartesch	Canister

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## SWEDISH (Continued)

Laddning	Charge
Lätt	Light (not heavy)
Luftvärn	Antiaircraft
Lysammunition	Illuminating ammunition; flare ammunition
Lyagranat	Star shell
Lysvinggranat	Flare mortar shell
Med	With
Modell	Model
Mätlyspatron	Testing (measuring); flare cartridge
Nedslagarör	Impact fuze
Pansar	Armor-piercing; armored
Parti	Lot
Pansarbrytande	Armor-piercing; breaking
Pansargranat	Armor-piercing shell
Pansarladdning	Armor-piercing charge
Pansarprojektil	Armor-piercing projectile
Projektil	Projectile
Projektillada	Projectile case
Projektilvikt	Projectile weight
Pansarspränggranat	Armor-piercing shell

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## SWEDISH (Continued)

Pansarvärn	Antitank
Pansarvärnsladdning	Antitank charge
Rökdetonator	Smoke detonator
Rökladdning	Smoke charge
Rökspranggranat	Smoke H.E. shell
Rökvinggranat	Smoke mortar shell
Rörladdning	Fuze charge
Spetsanslagsrör	Point impact fuze
Spränggranat	H.E. shell
Skarp	Live (ammunition)
Sprängkapsel	Blasting cap; detonator
Sparljus	Tracer
Sparljusbrandband	Tracer incendiary band
Sparljusbrand-spranggranat	Tracer incendiary H.E. shell
Sparljushalvpansargranat	Tracer
Sparljusnormalband	Tracer normal band
Sprangladdning	Tracer charge
Sparljuspansarband	Tracer armor-piercing band
Sparljuspansargranat	Tracer armor-piercing shell
Sparljuspansarprojoktil	Tracer armor-piercing projectile

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SWEDISH (Continued)

Sparljusprojektil-----	Tracer projectile
Sparljuspansar-spränggranat-----	Tracer armor-piercing H.E. shell
Sparljusspränggranat-----	Tracer H.E. shell
Sparljusstalgranat-----	Tracer steel shell
Sparljusövningsgranat-----	Tracer practice shell
Sparljusövningsprojektil-----	Tracer practice projectile
Stalgranat-----	Steel shell
Spetstidanslagerör-----	Point delayed impact fuze
Spetstidrör-----	Point delayed fuze
Sprängvinggranat-----	Blasting mortar shell
Svartkrut-----	Black blasting powder
Temperingsmaskin-----	Fuze setter
Temperingsnyckel-----	Fuze wrench
Temperingssprint-----	Fuze setting pin
Temperingsstreck-----	Fuze setting line
Tungt-----	Heavy
Tändhatt-----	Percussion cap
Tändör-----	Fuze
Urverk-----	Clock movement; works
Vinggranat-----	Mortar shell

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SWEDISH (Continued)

Zonslagsrör	Proximity impact fuze
Zonrör	Proximity fuze
Ogonblicklig	Instantaneous; nondelay
Ogonblickligsbrisd	Instantaneous blasting
Ovning	Practice
Ovingsammunition	Practice ammunition
Ovingsgranat	Practice shell or grenade
Ovingsgranatkartesch	Practice shrapnel
Ovingskonladdning	Practice cone charge
Ovingsprojektil	Practice projectile
Ovningsrörladdning	Practice fuze charge
Ovningsvinggranat	Practice mortar shell

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VIETNAMESE

Bích kích pháo, súng cối	Mortar
Chất nổ	Explosive
Chất nổ mạnh	High explosive
Đã được tân trang	Renovated
Đai chấn hồi	Rotating band
Đạn cháy	Incendiary
Đạn dược	Ammunition
Đạn mả tử	Blank
Đạn thông	Ball ammunition
Hóa học	Chemical
Hỏa pháo	Fuze
Hỏa pháo chạm đích nổ	Impact fuze
Hỏa pháo nổ tức khắc	Instantaneous fuze
Hỏa tiễn	Rocket
Hột chạm hỏa	Primer
Kết nạp hỏa pháo	Combination fuze
Kiểu	Model
Mạnh đạn, đạn văng mạnh	Fragmentation
Tạc đạn, đầu đạn (có chất nổ)	Projectile
TNT	TNT
Trọng lượng	Weight

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VIETNAMESE (Continued)

Vach đổng sáng	Tracer
Viên đạn toàn bộ	Complete (fuzed) round
Xưởng chế tạo	Factory
Xuyên phá thép	Armor-piercing

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## KEY WORDS

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